President's Address

DELIVERED AT THE

SEVENTY-EIGHTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

BY

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THE EVOLUTION OF THE ASSOCIATION AND ITS WORK.

At almost every meeting of the Association the President may choose for the subject of his address anything in the heavens above, in the earth beneath, or in the waters that are under the earth. But this year the subject of the President's Address is strictly prescribed by the circumstances of his election. You might have chosen a man far more distinguished in his profession, of greater fame, with title or riband, but you have deliberately taken, in preference, a less distinguished person for the sole reason that he has worked for the Association and that you know that he has the interests of the Association at heart. You have, as it were, said to him: "Thou good and faithful servant, take thou the presidential chair." And the only way in which he can repay you for the honour you have done him is to speak of the Association, to tell what it has done in the past and what it now is, and, perhaps, what it may yet do. If it were not my duty it would be my pleasure to do this, for it is good now and again to look back into the past and ponder over the lessons which it teaches, and to see how and to what extent they can be applied to the present and the future; and it is also good, in a great city like this, where there are foreign visitors and distinguished guests and special delegates from our Branches oversea, to give them some idea of the work of their and our Association.

Annual Meetings.

I could not, of course, give a history of the Association in this address; indeed, I would not if I could, for a large part of it would have no interest for many of my audience. But I would deal with certain features of the Association, and would illustrate them with word-pictures where that is possible. And, first, of the annual meetings, at which every one knows there is a good deal of eating and drinking and giving of toasts, without which no civilized country seems able to conduct its business. But you shall soon see that the meetings are not for the sole purpose of feasting and junketing. For that purpose go back to the meeting at Plymouth nearly forty years ago (1871), where the Address in Surgery is read by an English surgeon practising in Edinburgh, to which he has recently been transferred from Glasgow. His name has been during the last two or three years in the mouth of many persons, and there is a good deal of difference of opinion on the value of the doctrines which he professes. As you see him now he is a man some forty years of age, rather above the middle height but not tall, of stately presence, with a broad brow and a face which betokens earnestness and amiability, but scarcely, perhaps, that determination of which he gave such signal proof in the course of the next five-and-twenty years. He is very neatly clothed in garments of a sombre hue (indeed, I think he belongs to the sect of Quakers), and his address is slow and without the attraction of eloquence, and he describes his methods with such detail and exactitude as must have been tedious to many of his audience, most of whom do not profess his principles and few of whom follow his practice. Yet this is none other than the great Lord Lister, as yet almost an unknown surgeon, and he is telling to probably the largest number of persons he has hitherto addressed the principles of antiseptic surgery. And thus he finishes:

> For, sure I am that, however much the means of carrying out the antiseptic principle may come to vary from those which we now use, the principle itself will certainly be ultimately recognized as the most important of all those that shall guide the practice of surgery; and the sooner our profession is aware of this, the better it will be for suffering humanity. (*Collected Papers*, 1909, vol. ii, 198.)

Now visit with me the town of Worcester eleven years later where the Association is celebrating its fiftieth anniversary (1882). And enter the town hall a little late, as I did, for the commencement of the Address in Surgery. This time the speaker is a tall Irishman (Sir William Stokes), and at the very moment you enter he is supporting the antiseptic principles with the true eloquence of his countrymen; and well he may do so, for only three years previously, at a meeting of the Association at Cork, the principles had received a nasty blow from my eloquent and gifted colleague, Mr. Savory. The orator's head is thrown back, his chest well forward, and he is in the full swing of his address, assisting the effect of his words by the grace of his action. He is dressed in a tweed suit, if I see aright, and I really believe that the strap of a field-glass hangs over one shoulder. But he is not, on that account, the less in earnest, and his address is a right-down good address.

And now take six years ago, when a Scotchman occupies the platform at Oxford, tall and stately, a man amongst men (Sir William Macewen), who speaks in grave terms befitting the speaker and the subject. He speaks also, like the others, on sepsis and antisepsis, but the principles have long since been accepted, and it is only questions of detail which occupy the attention of the meeting.

There is only one other address to which I would conduct you—that on Pathology at the Cambridge Meeting thirty years ago, where my revered master, Sir James Paget, is the speaker. His eloquence is such that had he been blind he would still have been a leader of men; and the genius of his mind looks forth so clearly through his eyes, that had he been speechless he might still have commanded many persons to his will. He is speaking on a subject hitherto but little dealt with—"the consequences of injury and disease in the structures of plants." Until that moment there were few people who were aware that he had ever studied it; but, as he spoke of it, it seemed as if it had been the one great study of his life. You can hear him now, as he says:

> Is there in all the range of natural history a more marvellous group of facts than may here be studied? If you would like to work out a problem in evolution, find how it has come to be a part of the ordinary economy of Nature that a gall insect compels some part of a plant to grow in a manner which, while injurious to the plant, becomes useful to one insect not yet born and to another who will, in due time, invade the gall and kill and feed upon its occupant, and then may itself be invaded and eaten by a third. (*Memoirs and Letters*, 1901, page 304.)

Such have been the men and of such a kind have been the subjects that have occupied the attention of large audiences at our annual meetings. And although I cannot promise you that the meeting of 1910 will bring forth any great discovery in medicine or change the whole face of surgery, I can confidently promise that the scientific part of the meeting, with its twenty-one Sections, each presided over by a distinguished person, and that the Addresses in Medicine and Surgery will be worthy of so great an occasion.

Public Measures.

From its very foundation the Association showed great interest in matters in which the public or the State and the profession were involved. In the first half-dozen years it had appointed committees to consider vaccination, the condition of parochial registers, Poor Law medical relief, medical relief of persons who are poor but not paupers, the suppression of quackery, the sale of arsenic, and other matters, and there was no reason to doubt the existence of that "zeal and alacrity" on the part of the members which had been recommended by Dr. Hastings in his first address at Worcester. They seemed full of energy and enthusiasm. There can be no question that the Association did influence legislation on many of these matters in which the interests of the public and of the profession are involved. But I thought I should like to be able to tell you to-night the history of some one instance, at least, in which the influence of the Association was paramount, and was acknowledged by the public as well as

by the profession. My own knowledge did not supply me with any such example, so I turned to my friends, the Editor of the JOURNAL (Dr. Dawson Williams), and the Financial Secretary (Mr. Elliston, whose father was a valued member for many years, and President ten years ago at Ipswich), and begged them to help me. Although neither of them could give me exactly what I wanted, they nevertheless did put me on the track of what I wanted, and I followed up the track, as you shall presently see.

In order fully to understand the term "medical reform," I must take you back to the early years of the last century, when a man might practise every branch of medicine and surgery on a qualification obtained by a single examination in either surgery or medicine, to the time of Bob Sawyer and Ben Allen; when the examinations of the various qualifying bodies in Great Britain and Ireland varied remarkably in severity, and there was no central authority which could influence them to alter the terms of their examinations; when there was no registration of legal qualifications, and it was difficult for the public, or even for the profession, to discover what men were qualified and what men were practising without a qualification. The condition of affairs was so unsatisfactory, that, in 1834, a Royal Commission was appointed to "inquire into and consider the laws, regulations, and usages regarding the education and practice of the various branches of the medical profession in the United Kingdom." Three years later, at its fifth annual meeting, the Association appointed what may be called its first Medical Reform Committee, with the somewhat wide instruction "to watch over the interests of the profession at large."*

In 1840 a bill was introduced into the Commons by Messrs. Warburton, Wakley, and Hawes, which contained provision for the establishment of a central council and for the direct representation of the profession on it.

In 1842 the Council of the Association presented to Sir James Graham, the Secretary for the Home Department, a memorial explaining the principles of medical reform which were advocated by the Association: a uniform and efficient primary qualification; representation of the profession on the governing bodies of the corporate institutions or on the proposed central council; and the registration of legal qualifications. The Association desired to wait upon the Home Secretary by deputation, but Sir James Graham would not consent either in that year or in the following year to receive a deputation.

He, however, introduced a bill into Parliament in the year 1844 which contained a scheme of registration.

In 1846 Messrs. Wakley and Warburton again introduced a bill for the "Registration of the Legally Qualified Practitioners in Great Britain and Ireland." Although this was only a small part of what the Association desired, it nevertheless presented a petition in favour of the bill, on the principle that the gain of a little is better than the loss of the whole. In the course of this year a deputation was actually received by the Home Secretary, Sir George Grey, who advised that the Association should approach such other of the medical bodies as were in favour of medical reform, and thus obtain stronger influence to bear upon the Houses of Parliament. The advice was accepted and acted on, but without success, and the Association was left to fight the battle alone.

Nothing seems to have been done for the next five years, when the Association, wearied by long waiting, directed its Medical Reform Committee to draft a bill on its behalf (1851).

In 1853 a deputation was received by Lord Palmerston, who was then Home Secretary, and even by the Prime Minister, the Earl of Aberdeen, whose grandson is one of our honorary members at this moment. Both these noblemen expressed sympathy with the views of the Association.

In 1854 Mr. Craufurd introduced a bill, but it was soon lost, and a memorial was sent up to Lord Palmerston.

In 1855 a deputation waited on Sir George Grey, who was again Home Secretary, and a bill was introduced into Parliament by Messrs. Headlam, Brady, and Craufurd, but was abandoned at the second reading.

In 1856 Headlam's Bill, which provided for a central council of which one-third of the members should be direct representatives of the profession, was again introduced into the Commons. It was supported by Lord Palmerston, and petitions were sent up by many Branches of the Association in favour of it. But it fell through, and so did a second Medical Reform Bill which was introduced during the same session of Parliament.

It was in this year that the Association changed its name, and to some extent its character, for it ceased to be the Provincial Medical and Surgical Association and became the British Medical Association. I do not know whether it was on that account or for other reasons, but sure it is that a very remarkable circumstance occurred in the course of the next year—

1857, when the Home Secretary (Sir George Grey), instead of being pursued by the Association, actually was himself the pursuer. He sent for Sir Charles Hastings to hear his views once more and to discuss with him the measures which should be taken. Finally, in

1858 Lord Elcho introduced the bill which became, in the course of that session, the Medical Act of 1858. It provided for the establishment of a General Medical Council and for the registration of medical qualifications. The influence and work of the Association were recognized by the appointment on to the first Medical Council of Sir Charles Hastings, the founder of the Association.

And now it might be thought that the Association, triumphant after many years of strenuous labour, would have been content with its achievement. But, alas! very little had really been accomplished. There was no minimum uniform and efficient primary qualification, and a young man might practise medicine on a surgical qualification, or the reverse, while there was no obligatory examination in midwifery. Registration was therefore little more than a farce. Again, there was no direct representation of the profession on the new Council, and the action of the Crown in its appointments did not fulfil the hope which had been cherished by the reform party. Only those persons who have for years devoted themselves to public affairs and whose whole heart has been in the struggle to carry a particular measure through can understand the terrible disappointment of the reform party. They had wrought for three times seven years for Rachel, and it was the hand of her sister Leah which they had at length obtained. To many zealous men these failures of a public measure are more bitter than the failure of their own private affairs. Their vigour is apt to be impaired, their health to be broken. I should have been but little surprised if the Association had, from this time, made up its mind never again to meddle with bills in Parliament. And certainly it did seem that its strength was spent. For, like some great animal heavy and sore from the wounds of a long and deadly combat, it lay prostrate for nine years. Then, as it were, it slowly lifted up its head, and, looking round, perceived that, not only was there no direct representation of the profession on the General Medical Council, but that, now that Sir Charles Hastings was dead (1866) there was not even a representative of the Association. Nevertheless, feeling that the new Council which it had helped to create knew what it had desired, and, therefore, hoping that it would be likely to join with it in attempting to obtain reform, the Association sent a deputation to the General Medical Council in the course of the year—

1868. But the reply was that, "under present circumstances, it would not be expedient for the Council to consider the propriety of attempting to obtain a change of constitution," and it was thus found that, instead of a friend and ally, this new body was likely to prove a serious obstacle to reform.

In 1869, therefore, the Association began afresh. A deputation waited on the Lord President of the Privy Council (Earl de Grey and Ripon), who, in the following year—

1870, introduced a bill into the Lords, but it contained no provision for direct representation, and the Association would have none of it. A deputation was again sent up to the Lord President, and to the Vice-President of the Privy

* Most of the information contained in this account of the doings of the Association in relation to medical reform is taken from Dr. Alexander Henry's "Historical Sketch" in the JOURNAL of 1882, vol. ii, page 847. The latter part of the account is picked up from the reports of the Medical Reform Committee in the JOURNAL and from other sources. Dr. Henry's "Historical Sketch" is profoundly interesting to every person who cares for the past and present of the Association, and I strongly recommend its perusal to all those who are now engaged in the work of the Association.

Council, and the bill fell through owing to pressure of business.*

In 1873 our old ally, Mr. Headlam, came to the assistance of the reform party, and introduced a bill, which was also lost through press of business.

In 1877 history was repeated, for, wearied of long waiting, the Association directed its committee to draft a bill.

In the course of the next session—

1878, the bill of the Association was introduced by Messrs. Mills and Childers, and another bill was introduced into the Lords by the Government, but both bills were lost; they were again introduced in the course of

1880, passed the second reading, and were referred to a Select Committee. I suppose, as the consequence of this, in

1881, a Royal Commission was appointed to consider the working of the Medical Act. The Commission was not long in reporting, and in

1882 the Reform Committee expressed satisfaction with the terms of the report, and sent up a deputation to the Lord President of the Council. It is a mark of the growing influence of the Association that this deputation was introduced by no less a person than the Duke of Westminster. During that session a bill was presented to the Lords by the Lord President, but it was lost in the Commons from lack of time.

In 1884 the bill was again introduced, was accepted by the Lords, and made a Government measure in the Commons; but it met with such strong opposition on the part of bonesetters, cancer-curers, herbalists, and the like, and from one or two of the corporations, that it was lost, in spite of the evident desire of the Government to carry it through.

In 1885 a less ambitious measure was introduced, but a change of Government took place, and the measure was abandoned.

In 1886 the Medical Reform Committee urged the importance of reform so firmly on the new Government that a measure was passed through the Lords by the Lord President of the Council (Earl Spencer), and through the Commons by Sir Lyon Playfair, and became the Medical Act of 1886. It provided for direct representation of the profession on the General Medical Council, and that a legal qualification to practise should only be obtained by those persons who had passed an examination in medicine, surgery, and midwifery.†

Thus, after nine-and-forty years of labour, the Association had been successful, not to the full extent of its desires, but to a very large extent. And it had every reason to be proud. You see that I have taken the trouble to learn all these details in order to narrate to you what you may deem a very tedious story. And you may be sure that I did not learn them easily. And you may ask why I was at such pains to make myself master of a story so full of tedium. It was on that very account I did it. I would have every member of the Association learn the story as I have learned it—particularly every young member. I would have it printed in large type and set up in every building which is devoted to the service of the Association, that all men may find in it an object-lesson of what can be done by patience and perseverance, by determination and tenacity of purpose.

So I would have the names of all those members of the Medical Reform Committee who took an active part in its work handed down: of Hastings of Worcester, Barlow of Bath, Crosse of Norwich, Southam of Manchester, Stewart of London, Waters of Chester, Ernest Hart, and many others. They are all gone, and there remain only a very few of those who took part even in the promotion of the second Medical Act—Dr. Bruce Goff and Dr. Hugh Ker, who are still working for the Association, and Sir Walter Foster, now Lord Ilkeston, who was one of the first direct representatives of the profession on the reformed Medical Council. I am proud that we have these three members with us this week.

SCIENTIFIC GRANTS AND SCHOLARSHIPS.

Now, take quite another phase of the work which we have done. In the Seventies of the last century there was not so much talk of original research as there is in these days, and but little money was then supplied for research. In those days, as in these, there were many men, for the most part young men, who were waiting about the hospitals for a place upon the permanent staff, or were hoping to get into private practice. They were just able to maintain themselves (for few of them had much private income) by teaching and minor posts and appointments. They often had time on their hands, and, being above the average of young medical men in intelligence and education, were willing and glad to seek occupation and perhaps a name in original research. They were often able to find a work-bench in one of the hospital laboratories, and aid and counsel from the professors and lecturers. But the researches were, in many instances, expensive, and they had not the means to meet the expense of material and apparatus. When the Association began to find itself in funds, it was suggested to the Council, I believe by Mr. Ernest Hart, that a certain sum of money should be awarded every year to research workers to assist them to obtain the material and apparatus which they could not procure for themselves. In the year 1874 the Scientific Grants were founded; £165 were granted that year, and I am sure it will be a matter of interest to some of the members here to-night to learn that the first grant out of that sum which appears on the minutes was a grant of £50 to Mr. Hicks for "Researches on Alcohol." I do not know how many grants have been made or how many researchers have benefited by the Scientific Grants, but I do know that from £300 to £400 has been awarded every year, and that such men as Washbourne, Bayliss, Starling, Rose Bradford, Kanthack, Halliburton, Gaskell, and many others quite as distinguished, have been recipients of grants, and that a large number of researches have been made possible by the liberality of the Association.

Ten years later (1884) two Research Scholarships of £150 each were founded, to enable men to devote their whole time to particular researches. Since that time there have been some fifty scholars of the Association, and it will suffice to tell you that Sir Watson Cheyne, Dr. Sidney Martin, Dr. Stockman, Dr. Copeman, of the Local Government Board, Professor Haycraft, and Professor Starling have been scholars of the Association to prove to you the pains which have been taken to select persons fitted to pursue original research.‡

It has been my lot to speak both for and against the Scientific Grants on more than one occasion. As Treasurer of the Association, I have had to restrain the ardour of the Committee and to prevent it dipping its fingers too deep into the purse of the Association. As a member of the Committee, I have had to defend the grants from the platform at the annual meetings. There have always been members of the Association who have grumbled that the money devoted to scientific purposes was not applied to the defence of members and to the suppression of illegal practice. And, even of those who approved of the grants, there were always some who grumbled at the nature of the investigations, and wished to see the money applied to investigations which were likely to find a certain and immediate practical application.

* Many years later (1889) I was present at the dinner of the Association at the annual meeting at Leeds, when Lord de Grey, then Marquis of Ripon, referred to this matter. Part of his speech ran thus: "He was bound to say he had occasionally found in those departments (the War Office, the Admiralty, and the Privy Council) men of ultra-official views who were so irreverent as occasionally to speak in terms not altogether of admiration or respect for the British Medical Association. He once, indeed, had to suffer from the action of the Association. When he was Lord President, he endeavoured to deal with the subject of the constitution of the General Medical Council, and he introduced a bill which he thought was a very good one, and most of the provisions of which had since become law. It did not, however, contain one provision greatly desired by the British Medical Association, and they so effectually pleaded for delay at a fatal moment towards the end of the session that they defeated the bill, and stranded him altogether until he was carried away in the wrong direction by the rising tide of opposition. He was bound to say—and he made the confession very frankly—that he was now convinced that the Association was right and he was wrong. He was, perhaps, on that occasion—it was a rare occasion in his public life—somewhat too conservative."

† The Association had fought for many years for eight direct representatives on a Council of twenty-four persons. The bill only provided for five—three for England, one for Scotland, and one for Ireland. Only in the course of last year (1909) was the representation increased by the action of the General Medical Council itself.

‡ Sir Watson Cheyne, Bart., Surgeon to King's College Hospital and Surgeon-in-Ordinary to His Majesty the King; Dr. Sidney Martin, Physician to University College Hospital and Professor of Pathology; Dr. Ralph Stockman, Professor of Materia Medica at Glasgow and Physician to the Western Infirmary; Dr. Copeman, Medical Inspector to the Local Government Board and Lecturer on Public Health to Westminster Hospital Medical School; Dr. Starling, Professor of Physiology at University College; Dr. Haycraft, Professor of Physiology at University College, South Wales, etc.

I confess that these latter grumblers have sometimes had my sympathy. Researches on pulse curves and researches on biliary secretion seem a long way from practical medicine. Yet I would not, on any account, interfere with or appear to despise any research, however little it might seem likely to be useful to the practice of medicine and surgery, provided it is in the hands of a competent worker, and is likely to provide new knowledge. The last time I spoke in favour of the grants was, I think, at Cheltenham, where I directed the attention of the meeting to the vast commercial and industrial use which had been made of Faraday's discoveries of the relations of magnetism to electricity. The discoveries seemed to belong to the purest realms of science, and nobody could have foreseen their practical application. And it was not Faraday himself who made the application. He would never touch that side of the question, as he believed that to do so would damage his powers of research. Tyndall speaks particularly of this,* and I am sure that some discoveries which have appeared to have no practical bearing have resulted in greater advantage to the practice of medicine than some of those researches which have been undertaken from the purely utilitarian point of view.

At the present moment it is the fashion to say that things are better managed in Germany; as people said in my young days, "They do these things better in France." Although I do not at all admit this as a general proposition, I think it is to some extent true when it is applied to the relative value which English and German business men attribute to scientific research. I am informed that some great industrial concerns in Germany build and equip large laboratories in which fifty to a hundred chemists are continually employed at varying salaries according to their position, and that they are directed by the most distinguished chemist the industry can procure. These chemists are not only permitted but are encouraged to prosecute research, and the researches are not limited to the possible utility to the industry, but may take any direction which seems good to the worker and the director. The object of the industry is to encourage chemical and physical research, with the full confidence that in a series of years the industry will derive enough benefit to pay the cost of the laboratory, and will probably derive more benefit than it would do by limiting the nature and scope of the researches to the possible service of the industry. Only the other day I was looking through the *Collected Papers of Lord Lister*, and noticed that the earliest researches which he made were on muscular and elastic tissue. Suppose that he had been dissuaded from these researches on the ground that they seemed to have little or no practical bearing, he might have been so far discouraged as never to have undertaken original research. What a lamentable thing that would have been! What a loss to human beings! No, the taste and faculty for research need to be encouraged in a likely worker, even if the objects of his researches give no hope of immediate practical value.

Nevertheless you may fairly ask me whether I am not able to show something of value to practical medicine and surgery which has resulted from the money which the Association has devoted to science. Yes, I could give you several instances if I had time to do so, but one must suffice. In 1883, in consequence largely of an observation made by my old friend Sir Felix Semon, the Clinical Society of London appointed a committee to consider the nature and relations of myxoedema. The work of the committee was divided into several parts, to which competent persons were assigned. The experimental part was chiefly under the charge of Professor Horsley. It was essential to the completion of the work of the committee but it was costly, and the Clinical Society had not made any grant towards it. This part might have fallen through, and the report of the committee might have been seriously prejudiced and its value profoundly lessened, had not the Association come to the aid of the committee with a substantial grant, which was supplemented after an interval by further sums towards an inquiry into the physiology and pathology of the thyroid gland. To this work may be attributed thyroid-therapy and a wide knowledge of the relations of the thyroid gland to health and disease. And indirectly it may be said that this was the beginning of all the knowledge which has since been gained on the physiology and pathology of other of the ductless glands.

One matter to which the Association has largely contributed is the study of chloroform.

Several committees have been appointed on this very important subject. The last committee has only just published its report.† I have read it carefully through, and have formed the opinion that the £700 which has been devoted to this committee is a very small sum in comparison with the practical value which the work of the committee is likely to have. At least £1,500 have been given to the various committees which have worked on this subject for the Association.

There is one grant which was made by the Scientific Grants Committee eighteen years ago, and actually paid over to the applicant, but I am sorry to say it was never used. It was made to a certain Surgeon-Captain David Bruce to assist him in the investigation of Malta fever. Other arrangements were made for Captain Bruce, so the money was returned to the Association, otherwise we should have had the credit of having assisted that distinguished military officer in the very early days of his researches. What a satisfaction that would have afforded every member of the Association!

I can only further tell you that, including grants to the Jenner Institute, to the Therapeutic and other committees, the Association has provided more than £33,000 for scientific purposes since the year 1873.

BENEVOLENCE.

Just now I spoke of the dissatisfaction of some of the members of the Association that our revenues are devoted to scientific purposes instead of to the needs of the profession. It seems to have been determined very early in the life of the Association that its income should not be applied to the benefit of the members. When the Association was incorporated under the Companies Acts in 1874 it was expressly stated in the Memorandum that the members of the Association should not be entitled to benefit from the income of the Association.

But from the very first the members were mindful of the material necessities of the profession. At the first annual meeting in 1833 Dr. Barlow, of Bath, presented proposals for the establishment of a benefit fund. The proposals were ordered to be printed and circulated among the members. At the third annual meeting it was recommended that a society be formed, to be called the Provincial Medical Benevolent Society, and that a fund be accumulated by subscriptions and donations. It is quite pathetic to read in the report of the Benevolent Society two years later that the committee had been enabled to bring the fund into operation, and to afford relief in two cases of distress!

For many years the Benevolent Fund reported each year to the Annual Meeting of the Association, which took the greatest interest in its affairs, and which has continued to interest itself in them from that time to the present. The pages of the JOURNAL have always been open to official communications, to letters and articles in favour of the Fund, and even the machinery of the Association has been used, by the kind permission of the Association, for collecting subscriptions and donations towards it, with such success that last year the Fund was able to boast that since its establishment it had distributed about £76,000 in annuities and the same amount in grants, and now administers about £4,500 a year; that out of the income derived from investments it supports 126 annuitants, who must be over 60 years of age, and that the annual subscriptions and donations form a fund out of which grants are made to deserving cases not eligible for annuities.

I am not exaggerating when I say that the British Medical Benevolent Fund owes its origin, its first successes, and its present position to our Association.‡ It has probably done better as an independent body than if it had been, as was intended in the first instance, a part of, and dependent on, the Association. I doubt whether it would have received anything like so large a sum in donations and legacies as it has actually done. On the other hand, its relations with the Association have been throughout of such value to it that the good influence which the

* *Faraday as a Discoverer*. London. 1870.

† BRITISH MEDICAL JOURNAL, SUPPLEMENT, July 9th, 1910.

‡ See BRITISH MEDICAL JOURNAL, 1905, vol ii, p. 1655.

Association has exercised over its affairs cannot be too highly estimated.

To those persons who are disposed to complain that the Association has never done anything for the material welfare of its members or of the profession this account of the British Medical Benevolent Fund is my answer, and I trust I shall never again hear the complaint.

PAST HISTORY AND GREAT OFFICIALS.

Although I am not going to furnish a history of the rise and development of the Association, there are certain matters in its past which will interest the members here to-night. It was founded, as you know, in the year 1832, when there were but few railways, when the lesser roads were not too good, when it took days, not hours, to reach the metropolis from many parts of the country, and when perhaps more doctors rode on horseback than went in wheeled vehicles to see their patients. Yet, even then, Dr. Hastings, who founded the Association, said, in his address in the board room of the Worcester Infirmary, "The facilities of communication between distant towns . . . had become so much greater that distance would afford but a slight barrier to the undertaking."* At the first annual meeting in 1833 about 200 of the total 316 members were present. But the Association made but slow progress in the course of years. In 1874, when it was incorporated under the Companies Acts, it only numbered between 5,000 and 6,000 members. And as to its finances in the early years, they were deplorable. Four-and-twenty years (1856) after its foundation it was £2,000 in debt, and the members had to put their hands into their pockets to help it out.

Although it met in different large towns in the United Kingdom, it was not until the thirty-eighth meeting, nearly forty years ago, that its presence was officially recognized by the appearance of the Mayor, Sheriff, and Under-Sheriff of Newcastle-on-Tyne at the opening meeting in their robes of office. The scientific business of the annual meetings was only divided up into sections just before that time (1867), when four sections were established—Medicine, Surgery, Physiology, and Midwifery. Indeed, the progress which was made during the first half of its life (of seventy-eight years) would never have justified an observer in predicting its present numbers and importance. It was just about thirty-eight years ago that it began distinctly to advance; and, as usual, it was not measures, but men, that caused the advancement. Indeed, there has never been any question in my mind on this point. Nor have I ever had the least doubt of the particular men to whom the Association owes more than to any other men, dead or living. They were both officials of the Association, and each of them remained in its service for more than thirty years.

The first was a little sallow-faced Jew, with clean-cut features and piercing eyes, active in mind and body, clear-headed and as keen as men are made. The reputation of our JOURNAL when Mr. Ernest Hart became its editor in 1866 was none too good, and only in the previous year a proposal had been made to the annual meeting to replace it by a less expensive journal.

From the moment Mr. Hart took it in hand its future was ensured. His wide knowledge of all matters connected with his profession, private and public, professional and general, and his skill in writing, would have enabled him easily to perform all the editorial work which was then needed or was likely to be needed for many years to come. But that was not his idea of editing. He gathered to his aid every man who had a special knowledge of any subject which appeared in the pages of the JOURNAL, and persuaded him to give his opinion on the value of the communication, and even to write unsigned articles and annotations upon it. I was very much surprised the first time I signed the quarterly cheques to discover the large number and the position of the contributors to the JOURNAL. Each man was paid for his contribution, but while a good deal was paid away each year, no one person received much more than a trifling sum. This was, I believe, an expensive way of conducting it, but in a very few years it had made the reputation of the JOURNAL. When Mr. Hart became our editor the number of members was only between 2,000 and 3,000, and when he resigned, after thirty-four years' service, it was 17,000. The work of editing would have been quite enough for most men; it was only a small part of what was done by Mr. Hart. There was no question of public health which he did not deal with or attack. And his interest in all that concerned or might concern the Association in the future was truly remarkable. I believe the foundation of the Scientific Grants and Scholarships was largely due to his influence. I *know* that the library owed its actual origin to him, although it had been considered at the very first meeting of the Association. The Medical Sickness Society was, Dr. Hall tells me, his idea. His mind teemed with fertile thoughts, and they were always at the service of the Association if they were likely to be useful to it.

The other official was Mr. Francis Fowke, not known to the members as the Editor was, and really only understood and esteemed by those persons who were closely associated with him in business affairs. He was our General Secretary and Manager, and to him fell the charge of all matters connected with the printing and publishing of the JOURNAL, the advertisements, the collection of subscriptions, the arrangements for the annual meetings, and I know not what else.

He it was who advised the removal of the offices of the Association to that great artery of traffic, the Strand; who gradually took over the printing of the JOURNAL, the provision of the paper on which the JOURNAL is printed; who studied various methods of improving the illustrations in the JOURNAL; who devoted his attention to every little business detail with such success that the surplus income of the Association, which was £38 when he became its Manager in 1871, was nearly £5,000 when he resigned his post in 1902. No wonder that successive Treasurers placed their confidence in Mr. Fowke, and supported him one after another in the schemes which, with great caution and after long pondering, he put forward for some improvement in one or other of our business methods.

It would be difficult to find two men less like each other than the Editor and the General Secretary and Manager. Mr. Fowke was gouty and asthmatical, nervous and apprehensive, constantly apologetic, slow of speech, and slow to form a judgement, particularly in matters relating to finance. No wonder his brilliant colleague looked upon him with a feeling almost of contempt. But there is no use denying it. In spite of what was said in some of the obituary notices of the Editor's financial abilities, and in spite of his nationality, he was really a very indifferent financier. And this was appreciated fully by the Manager, who repaid the feeling of contempt for himself by the strongest expression of distrust of the financial schemes of the Editor. It may easily be imagined that there were no feelings of cordial friendship between two such men. This was quite well known to many persons interested in the Association, and during the years I was Treasurer it was several times suggested to me to do my best to heal up the dissensions between the two great officials. But I would not listen to such suggestions. No lasting peace was possible between them; and my own opinion was that the safety of the Association was better secured by their hostility to one another than it would have been by their friendship. Each kept a watch upon the other useful in the interests of the Association. Had they combined, there might possibly have been mischief. Had there been two Harts, the Association would probably have been swiftly borne to that great personage to whom the beggar on horseback is said to ride. Had there been two Fowkes, it might have gone to sleep. Peace be to the ashes of these two men, and let us be thankful that their places are so excellently filled by our present Editor and Financial Secretary (Dr. Dawson Williams and Mr. Elliston).

THE FUTURE.

I fain would speak of many other matters—of the Library, of our new premises in the Strand, of the formation and growth of the Branches, of the extension of the Association beyond the seas, of our JOURNAL, etc. But I have been warned not to trespass on your patience by speaking at too great length, and the warning is full of wisdom. I must therefore devote the few minutes which are left to me to the present and future of the Association. What is this great Society to do with its

* BRITISH MEDICAL JOURNAL, 1882, vol. i, p. 847.

22,000 members, its numerous Divisions and seventy Branches, its Council and Representative Parliament, its great Standing Committees, its Medical Secretary's department, and its large revenues? Well, since its reconstitution eight years ago it has devoted its attention very largely to the defence of its members and of the profession generally against the attempts which are made with cruel frequency against them by many sections of the community. Whilst extolling the nobility and generosity of our profession as a whole, it is notorious that public and private bodies, municipalities, corporations, clubs, medical aid institutions, charities, vie with each other in their attempts to use our services without reward, or for the smallest compensation which is possible; and it is equally clear that the only chance which the rank and file of the profession—those men who perform the most and the best of its work—have to repel these attacks is the support of a great and powerful body like our Association. Medical men talk of these things as if they belonged only to modern times; as if, until recently, we had been fairly treated, and no attempt had been made to impose on our good nature. I would ask them to read a certain report of the first committee which the Association appointed to consider the question of Poor Law medical relief, presented seventy-five years ago (1835).

> Your Committee are aware that the vast amount of gratuitous medical assistance that has been at all times afforded to the needy by all grades of the profession throughout the country (an amount that could not be conceived by those who were not informed on the subject) has been productive at least of one very injurious effect: it has induced the unthinking portion of the public to conclude that there was some sort of conventional, if not legal, obligation on the medical profession to attend, without reward, to the ailments of the poor.

The words of the Committee can be applied with even greater truth to-day, and there has never been a time in the last three-quarters of a century when they might not have been truthfully applied. Years ago, during the time that I took an active part in the work of the Association, we made attempts from time to time to assist medical men in repelling these attacks, and with more or less success. Now the Association is dealing with this part of its work with much greater vigour and with the intention to do its best to help the oppressed members of the profession. And, as the result, in these last years I believe the body of the profession look with greater hope and confidence upon the future than they have ever done within my recollection. This side of our work has my hearty wish for its success. My mind is frequently saddened by the hard cases of some of those practitioners whom I have known as well-educated, industrious, and intelligent, and who have been cruelly ill-treated by public bodies and societies. But I am afraid there is no side of our work which needs greater tact or more delicate handling than this. An expression of undue force on the one hand, an exhibition of weakness on the other hand, and the amount of mischief which may follow is incalculable. I cannot remember any period of our history when our affairs required more skill and sagacity than the present. Every one naturally turns to watch what the governing bodies of the Association will do. I watch, like the rest, and I have studied the men who are entrusted with the guidance of our state. I have mixed with the members of the Council and, to some extent, with the members of the Representative Body in this last year, and I have come to the conclusion that, although their task is grave and difficult, they are the men to undertake it with success.

The International Medico-Psychological and Psycho-therapeutic Association will hold its first annual meeting on August 7th and 8th, immediately after the Congress of French-speaking Alienists, which is to be held at Brussels.

Mr. Robert Newstead, lecturer in economic entomology and parasitology of the Liverpool School of Tropical Medicine, who was recently sent to Malta, with the co-operation of the Colonial Office, to investigate the bionomics of the sandfly, writes that he has completed a general survey of the more important centres in Malta, chiefly military, where sandflies are most prevalent and cause great annoyance to both troops and civilians. He next proposes to investigate the bionomics of this pest at Citta Vecchia.

Address in Medicine

DELIVERED AT THE

SEVENTY-EIGHTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

BY

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THE DOMINANCE OF ETIOLOGY IN MODERN MEDICINE.

Mr. President, Ladies and Gentlemen,—My first duty, and to me the most pleasant of my duties, on this occasion is to thank Mr. Edmund Owen for the high compliment that he paid me in inviting me on behalf of the Council to deliver the annual Address in Medicine. I do thank him heartily, for I appreciate the special importance and distinction attaching to the office when the Association meets in London. I have felt only too keenly in the preparation of my Address the difficulty of justifying the selection of me as spokesman for Medicine before you, and before a public that is always ready to interest itself in our proceedings. And I have also become keenly aware of the difficulty of finding a fresh line of thought along which to lead a learned audience like mine, and maintain their interested attention for a whole hour—an audience of whom many have listened year after year on similar occasions to my distinguished predecessors.

Recent Advances.

The annual Address is traditionally expected to include a chronicle of the advances that have been made in the science and art of Medicine since the last meeting of the Association. Not a year goes by but there is abundant reason for mutual congratulation on this account. The past twelve months are no exception to this experience. And if I were to recount to you our gains during the whole of the fifteen years that have elapsed since we last met in London we should indeed find cause for satisfaction. I will spare you such a trial of your patience. Our weekly Epitome and our year-books keep us up to date in this information, which we scarcely ought to require if we have done our best to assimilate new facts and take advantage of clinical and therapeutical improvements as they are announced. Therefore I will content myself, and no doubt satisfy my audience, with a very brief record of the additions to our knowledge of disease, and of the improvements in our means and methods of diagnosis and treatment, of the first magnitude only. I will then ask you to survey with me what I consider the principal line of progress in Medicine during this interval, the position that has been won, the prospect lying before us of further advance, and the need and the call for it. It is right that this address should reflect, however imperfectly, the spirit and aspirations of the time.

First of the great events to which my record of the period will be limited comes the discovery of the spirochaete of syphilis; of the part played by the mosquito in malaria and in yellow fever, and by the goat in the diffusion of Malta fever; of the connexion of a trypanosome with sleeping sickness, of the Leishman-Donovan body with kala-azar, and of the *Diplococcus intracellularis meningitidis* with cerebro-spinal fever. The existence of typhoid carriers has been fully demonstrated, as well as the dangers of other typhoid products than the stools. Investigation has been pushed forward during the same period into the relation of human to bovine tuberculosis, and stringent regulations have been framed in respect of milk and meat as articles of food. The effects of oral sepsis have been worked out, and prove to be so widespread, so multiple, and frequently so grave, as to make us ashamed of our previous blindness to a common source of blood infection staring us in the face all those years. Autointoxication proper has attracted professional—and only too much public—attention, and led to the introduction of a great variety of dietetic and medicinal "cures." Of improved methods of observation and diagnosis,

blood examination in the many forms of its development and in its many applications deserves first mention; and special interest and importance attach to the Widal reaction in typhoid and to the Wassermann reaction in syphilis. Radioscopy, which was coming into clinical use in 1895, has been greatly improved and extended, more particularly in its applications to the investigation of gastric and intestinal disorders and diseases; and the orthodiagraph must be mentioned in this connexion. A great impetus has been given to the study of cardiac irregularity, and the sphygmomanometer is now generally employed. A real advance has been made in the introduction of lumbar puncture as a means of diagnosis in cerebro-spinal diseases.

During these fifteen years several new methods of treatment of the first rank have been either introduced or perfected. Chief of all comes serum-therapy and vaccine-therapy, of which I shall have more to say presently. Part of the development of the thyroid treatment of myxoedema and cretinism falls within this period, and with this may be coupled the introduction of preparations of the suprarenal gland into the materia medica. Of great importance is the employment of spinal analgesia as a substitute for general anaesthesia, the dangers of which have been closely investigated in relation to the status lymphaticus, as well as to post-anaesthetic acid intoxication. Other powerful means of treatment have been discovered in radium, in the Roentgen rays, and in the Finsen light. Of a different order, but full of promise, is the use of graduated labour as an element of sanatorium treatment in pulmonary tuberculosis. Of new drugs proper the most important are synthetic compounds with hypnotic and analgesic actions.

Inroads of Surgery.

When we consider how great are these gains, both in themselves and in their possible applications, we may be well satisfied with what has been accomplished within a relatively short period in the history of Medicine—of Medicine, I mean, in its comprehensive, original sense, the Healing Art. But if I had interpreted my position to-day as that of a representative of pure Physic in the limited sense of sister art of pure Surgery, I should have had to speak less cheerfully. I should have had to introduce my reference to the outstanding events in the history of Medicine during the last fifteen years by lamenting the striking change that has occurred in its scope and in its immediate interests through the many losses that it has suffered at the hands of the surgeon. One after another the great viscera in their pathological and therapeutical relations, as objects of treatment and of clinical study and demonstration—and, I might add, as subjects of physiological investigation and interest in the medical wards and hospital laboratory—have been taken over in good measure by him. This is one of the revolutions brought about by the epoch-making work of Pasteur and Lister. The graver diseases of the stomach, the duodenum, the liver and gall-bladder, the appendix, the colon in its whole extent, the pancreas, the kidneys, the lungs and pleura—even the heart, the brain and the spinal cord—have, one after another, been gradually passing out of the hands and experience of the physician. Consider the loss that this means to Medicine—to what the Germans call *innere Medizin!* The physician may well be anxious about his position now and in the future. The field of practice contracts before his eyes. He may be forgiven if he feels a twinge of soreness and even of jealousy pass across his mind when he watches the steady sap of his position by his operating colleagues. But this is only a passing grudge! I associate myself on the present occasion with Medicine in the wider sense, with Medicine as it concerns, not the consulting physician, but the family practitioner, who in his daily work disproves, with Sir Clifford Allbutt in a recent correspondence in the *Times* on this very subject, the necessity of "halving the understanding and management of individual diseases between two sets of persons." Medicine heartily congratulates Surgery on the brilliant advances that she has made, and rejoices with her in them, although many of them have been at her own expense. Has she not gained as much as she has lost by the inroads of Surgery? Surgery has not only effected in treatment much that Medicine failed to do and never could attempt; she has greatly increased our knowledge of the diseases of the viscera, and, indeed, not of their diseases only, but of their disorders, and even of their condition and functions in health, all as the result of direct observation of them *intra vitam*, intelligently employed, and of the effects of operative treatment. Surgery has assisted Medicine in Medicine's own methods; has furnished Medicine with fresh suggestions and fresh means of investigation; and Medicine, never slow nor too proud to learn, has availed herself of Surgery's findings and conclusions to perfect her proper knowledge for her own uses.

The Modern Doctrine of Causation.

This reference to the direction in which Surgery has advanced into the domain of Medicine, and the doctrine of infection on which this advance is based, introduce us to the greatest of the changes that have passed over Medicine since we last met in London.

The discovery of phagocytosis, and the appreciation of its significance as a provision for meeting the causes of acute disease, extended the seat of interest in the processes of infection from wounds to the blood and tissues, and to the immunizing properties or provisions discovered in the plasma. Anatomical pathology gradually gave place in great measure to bacteriological and chemical pathology, and therewith Medicine—practical medicine, as well as medical science—has taken a great step forward from the study of lesions to the investigation of processes, of the causes in which they originate, and of the circumstances by which they are controlled.

It is on this development of Medicine that I desire to address you mainly to-day—on the dominant position in Medicine which the doctrine of causation has come to occupy in the course of the last quarter of a century, and to occupy more and more securely during the period that has elapsed since the last meeting of the Association in London in 1895. For the truth of this thesis I have only to refer you in the first place to my brief record of advances these fifteen years. With a few exceptions they have been in the field of etiology—the discovery of essential causes of diseases, such as the spirochaetes and the trypanosomes; of media which bring these into relation with man, like the blood-sucking insects and domestic vermin; and of new methods of investigating infective processes, particularly in the blood. The triumphs of Surgery have taught the practitioner of Medicine to appreciate the fundamental place that etiology fills in pathology, and the significance of the essential, the predisposing, and the incidental elements respectively of the causation of disease. A remarkable change has been, and still is, passing over the character of Medicine. Etiology, which always had been regarded as one of the foundations of rational Medicine, has developed with extraordinary rapidity as a subject of investigation in the bacteriological laboratory, and as a subject of clinical inquiry at the bedside. This is an event in Medicine which more than any other appears to me to deserve historical recognition on the present occasion as a subject of interest not to the profession only, but to the public as well.

When we make a comprehensive survey of the whole field of Medicine during the past fifteen years, we cannot fail to be struck by the amount of time and labour that has been devoted to the study of etiology and by the abundant results that have been secured by it in the form of accurate knowledge of the causes of disease, the manner of their incidence on the body, the reactions of the body to them, and the circumstances that modify disease in its course. Following, as I have said, in the wake of Surgery and its investigations on the infectious processes on the surface of wounds, Medicine now conducts a methodical investigation into the bacteriological relations of infective processes in the blood and tissues—that is, into the essential cause—in every instance of acute febrile disease. How much has already been done and how much is daily being done in this attractive and promising field of observation, and how encouraging is the success that attends the application of this newer knowledge in practice, was revealed to us a few weeks ago in the brilliant discussion on the use of vaccines at the Royal Society of Medicine, with which many of you, no doubt, are acquainted. It is true that the usefulness of serum-therapy and vaccine-therapy is still far from being settled. Diphtheria, typhoid fever, the pathological effects of the *Bacillus coli*, and certain diseases of the skin yield to the method, and acute

pneumonia does so in some instances; but the medical septicaemias, tetanus, and even tuberculosis, after all the time and labour that have been devoted to the investigation of tuberculin, only too often do not, unless it be in tuberculosis of the skin and the bladder. We ask ourselves the meaning of this relative failure of the internal applications of our knowledge of the infections—our failure as compared with the successful results of aseptic Surgery. The question introduces us to the elements of the doctrine of infection and of the associated doctrine of causation.

INFECTION AND IMMUNITY.

Medical treatment of the infectious processes is relatively disappointing, mainly because we do not enjoy the incomparable advantage which presents itself to Surgery of dealing with the infection in advance of its action, by employing aseptic measures to prevent the contact of it with the blood and tissues. Before the practitioner is required to deal with the germ and its effects on the body, it has already reached the field of its operations and commenced its pathogenetic action. What is to be done? Observation demonstrates that even then it may not be too late to interfere. In a number of instances, as we have just seen—unhappily too few—successful resistance can be offered to intruding micro-organisms and to their toxic products. An antibody or an antiproduct may be introduced into the blood, or developed in it, in time to establish immunity.

This discovery, for which we have to thank Pasteur and Metchnikoff in particular, and their spirited and devoted followers, is after all but a scientific confirmation of the correctness of two well-established observations and a time-honoured conclusion founded upon them. The first of these observations was that whilst a large proportion of individuals fall victims to the infectious or contagious diseases, a considerable proportion do not. The older observers did not fail to be struck by the fact that this liability, proclivity, susceptibility, of certain persons as compared with others to be infected, or greater disposition to suffer severely from the disease or to die of it, was met with in the delicate and weak, and they formulated the doctrine that such delicacy or weakness is a "predisposing cause" of acute disease. We have come to express the same conception of the etiological relations of acute disease in other terms. We say that all individuals possess in some degree a provision of protection or resistance to the actions of pathogenetic organisms, which is to be regarded as natural, that is, as a normal or physiological safeguard against infection. Our blood and tissues have acquired this faculty of immunity or of developing immunity in the struggle for existence; they exercise it when provoked by the presence of infection; but in many individuals it is defective and fails because of some present personal circumstance, or of some remote family or racial weakness.

The second observation is that even those individuals who resist the action of invading organisms, who, for instance, harbour germs in their tissues without local damage or constitutional disturbance, may at any time under certain circumstances—that is, under changed conditions of life—lose their power of resistance. The germs that have been lying inactive within them suddenly manifest evidences of vitality in themselves, with disorder or disease in their host as the result. This is a fact of the first importance. It proves that there may be yet another element in the causation of acute disease; that there are three factors to be reckoned with. First, there is the cause which we call essential, the specific infection, an extrinsic influence, the element without which in the particular instance, and in every other instance, the disease would not have occurred. Secondly, there is the patient's resistance to the specific infection, an intrinsic element. Thirdly, there may be incidental or concomitant circumstances or associations which are not essential, because not present in every instance of the disease, but which, by occurring incidentally in particular instances, either favour the essential influence directly in its invasion of the body, or, on the other hand, lower resistance and thus indirectly contribute to the production of the disease.

INCIDENTAL CIRCUMSTANCES IN CAUSATION.

It is of this third element of etiology that I desire to speak to-day, with respect more particularly to its nature and forms, and with respect to the opportunities that it affords the practitioner, not only to forecast, prevent, treat or otherwise control disease, but to take part in the advance of medical science.

These concomitant circumstances are of great variety, both in kind and in the manner of their incidence on the body. When they act immediately, they are commonly known as the exciting, precipitating, determining "causes" of disease; for instance, a street accident that introduces the tetanus bacilli into the blood; the summer season, which produces the essential cause of hay fever; the hour of the day that determines an attack of ague; the emotional shock or the gastric catarrh that lays a person open to invasion by the germ of cholera; the drinking bout that precipitates acute pneumonia; the measles that determines an outbreak of tuberculosis; the different climates that favour the life and activity of different parasites; and also the different media—particularly food, drink and air—that serve to convey the essential, extrinsic cause into the victim. And these are but one group of the incidental circumstances that share in the production of disease, that may contribute to its causation in different cases, but are not an invariable factor of it. In a large number of instances the connexion is remote. It is found in the circumstances and life-history or record of the individual, or of his parents—insanitation, unwholesome occupation, dissipation, misfortune, privation, or disability left behind by previous illness, which have been slowly and steadily sapping constitutional resistance, and have reduced it to a state of inefficiency by the time that the struggle with infection or other morbid influence comes. I repeat that the outstanding feature of the Medicine of the present time is the study and practical applications of this doctrine of general etiology from the two sides—from the second as well as from the first side, that is, with respect not only to the nature and incidence of the specific causes of disease, but also to the nature of immunity and the circumstances under which it fails. Whilst the pathologist in our public institutions, in hospitals, and in private laboratories, investigates the biology of germs, and the immunizing value of the blood by means of the opsonic index and otherwise, the practitioner estimates, as he has done from time immemorial, with more or less intelligence and success, the value of what he calls his patient's constitution. He does this in part by ascertaining his patient's present bodily condition in respect of structural soundness and absence of functional disorder. But he pushes his inquiries on the subject much farther. He obtains his patient's entire record, family and personal. He informs himself of the circumstances under which his patient has been born, has lived, and is living, being assured that, after all, what we dignify with the name of natural resistance is but the product, the embodiment as it were, of all the influences that have fallen on the man—racial, congenital and personal.

The knowledge thus acquired by the practitioner he turns to practical account in two directions. First, he uses it as a guide in the immediate management of the case. Since he cannot prevent the inroad of germs, nor remove them, and since he can but seldom destroy them within the body, he may enable the patient to resist them. He protects the blood and tissues from the action of the infections by maintaining natural resistance at a high level—the method practised in sanatoriums for tuberculosis by means of fresh air, abundant feeding, and graduated exercise. Or—which is an object of far more frequent and far more extensive concern—he promotes personal and public hygiene in anticipation of disease, and succeeds in restoring, cultivating, and maintaining or increasing the natural resistance of the individual, the community and the race against the time when infection may fall upon them.

But, secondly (and here I crave your particular attention), in devoting attention to these other elements of causation, the practitioner contributes his share of the materials of which the doctrine of etiology is being constructed. Not all of us, indeed but few of us, can work at the higher pathogeny. In respect of infections, we can but admire the skill and perseverance of our bacteriologists, assimilate as much as possible of their conclusions, and seek their help in the diagnosis and treatment of this class of diseases. Bacteriological investigation is

too delicate and too difficult, and depends too much for its usefulness, and even for its safety, in practical Medicine on correctness of conclusions based on skilled observation, to be conducted by the practitioner himself unless in a few cases. But we can all take a share in the cultivation of knowledge of the other branch of etiology. After all, the pathological laboratory is not the natural field of operation and observation of the action of the infections, excepting in those instances, unhappily not uncommon, where the worker himself falls a victim to the disease that he is investigating. A knowledge of the patient's constitution, based on his record, is the peculiar privilege and possession of the family practitioner who takes full advantage of his opportunity. Living in the society of his patients, born and bred, as he may have been, in their midst, he knows or he ought to know the conditions of inheritance and life, good and bad, under which their constitutional resistance to acute disease has been and is being shaped. If he has made proper use of this opportunity, the family practitioner is in as good a position as the most skilled pathologist to give an opinion on the prospect of successful resistance—that is, of recovery—in a case of typhoid fever or of pulmonary tuberculosis.

Common Causes and Common Diseases.

Let me now take another step forward, and remind you that the acute infections are but one of the many kinds of pathogenetic agents. The countless influences around us, intimately associated with our daily life, constitute a group of possible causes of disorder and disease almost too familiar to receive attention from the modern pathologist, occupied with the investigation of micro-organisms. To the practitioner of Medicine, in the routine of his daily work, these and the respective and relative modes of their incidence and actions on the body are of equal or even greater moment; and from him they are receiving more and more attention. I refer to our manner and habits of living; the amount and pressure of our occupations; the forms and seasons of our occasional relaxations, our pleasures and amusements; the condition of the atmosphere in which we work; our food and the associated luxuries of alcohol and tobacco; simple physical stresses, whether in labour or in sport; the animals and plants with which we are closely associated—common media of transference of disease; climate and weather; and the many influences known as "nervous," which fall upon the brain in education, in business, and in the social and domestic spheres, which are intimately bound up with our personal happiness, and which may produce intellectual and emotional strain, anxiety, grief, and other unfavourable effects. And doubtless there are other causes of disease at work in our midst still to be discovered. It was not until a few years ago that the pathogenetic properties of germs were known. Consider what the state of etiology, pathology, and medicine as a whole would be to-day if this portion of what is now common knowledge had been overlooked. How long was not the mosquito unsuspected, the rat, the bug, the flea, the common house-fly? The search in this direction is being steadily pursued in the spirit of patient enthusiasm and hopefulness that stimulated and sustained Pasteur. If you seek for evidence of that pursuit and of that spirit you have only to turn to the work that is being done in Tropical Medicine, where a very romance of pathology is being daily unfolded.

Side by side with these agents we have the common or everyday disorders and diseases, more numerous than the infectious, many of them as often fatal as the other class, although unrecorded in the published weekly death-rate; many of them also productive of disablement or at least of relative disability, or in the young insidiously ruining the constitution; all of them fruitful sources of indisposition, suffering, and waste of work, and time and means, and therefore the common concern of Medicine and the State. Such are, for example, gastric catarrh, gastric and duodenal ulcer, appendicitis, gall stones, hepatic cirrhosis, emphysema, asthma, gout in its many forms, obesity, arterial sclerosis and Bright's disease, with their intimate associates separately named, including angina pectoris, apoplexy, uraemia; and such are the almost countless disorders of the different systems—the nervous system more especially—which I need not attempt to enumerate. Here is a list of but a few of the more familiar cases with which we meet in practice, and the causes of which it is as important—as necessary—to discover and understand and appreciate, in themselves and in the manner of their incidence on the body, as the causes of the acute febrile processes.

The Practitioner as a Naturalist.

Is it possible to trace what I have called common diseases to the common influences around us with scientific correctness? It is most difficult to say how far each of these influences acts directly, how far indirectly or incidentally only—that is, by interfering with resistance on the one hand, or by assisting essential causes on the other hand, as we saw in our consideration of acute specific diseases. The problem of the causation of many of the common diseases, when it comes to be faced practically, proves to be one of extreme complexity. It is rendered still more complex and difficult by the fact that the same influence may in one instance be an essential cause, in another instance an incidental circumstance only. A high atmospheric temperature is the essential cause of heat-stroke, but on the same day it acts as an incidental precipitating circumstance, only, of cholera infantum by favouring the development of a specific bacterion in milk. Extreme cold is the specific cause of frostbite and of death from exposure, but far more often it contributes to disease by incidentally depressing bodily resistance. This complexity of the causation of disease is so great that it might well discourage attempts to disentangle the different elements of it in the routine examination and treatment of our patients. Taken together, the three factors concerned in the production of disease constitute nothing less than the total relations of the individual and of the community to their environment. But if Medicine is to attain success as a genuine art—that is, as a pursuit that aims at doing the very best in the very best way—we must make an attempt to discover each element and to give it its proper weight. Here we have found a great opportunity, each of us individually, as extensive as our practice, and all of us collectively as a profession, of advancing Medicine; and here, as much as in connexion with the acute infections, the active pursuit of etiology is to be seen which characterizes present-day Medicine. Let me try to impress upon you the consideration that here the practitioner has the field in great measure to himself. He is prepared to seek the assistance of the pathologist when it is calculated to be useful, but in the great majority of cases the inquiry rests with himself, since the causes of which he is in search are other than micro-organisms, and indeed are not always material. The immense extent of the field of observation and inquiry does not discourage him, but the reverse. The practitioner has come to make it the first step of the diagnosis of his cases to search for the cause of the disease in every instance. He divests his mind for the time of the traditional or authoritative names or labels attached to diseases, and approaches each case in the spirit of a naturalist. Acute tonsillitis is no longer a single disease for him. He is not satisfied until he has determined by bacteriological examination which of the common infections is at work. He knows that sore throat is but a manifestation of the place of entrance of a specific organism into the blood. His way of regarding many of the common affections of the bowel has now come to be in respect of the kind and activity of the bacteria, normal and abnormal, that flourish within it; and on this consideration he bases his views of auto-intoxication, and his use of certain diets and intestinal antiseptics and purgatives. When he meets with a case of gall-stones, and plans preventive measures, he starts from purely etiological considerations—the cure and prevention of chronic biliary catarrhs in which bacteria flourish. Diabetes is to the practitioner not a hard-and-fast disease, but a disorder which he tries in each instance to refer to some part or other of the absorbent and assimilative systems in which a particular ferment or enzyme has failed. A case which a few years ago he would have been satisfied to call "pyelitis"—using a purely anatomical term—he now investigates forthwith by searching for the *Bacillus coli*, or for the tubercle bacillus, or for other organism. A case of haematuria, with fever and dropsy, is not nowadays regarded offhand as "acute nephritis," and

nothing more done in the way of diagnosis: the observant physician is aware that these are but phenomena due to the passage from the body by the kidneys of the pneumococcus, the typhoid bacillus, or other specific organism which he may not yet be able to differentiate more closely than as the germ of "septicaemia" or of "infective endocarditis." Consider how bacteriological examination of the sputum has furnished a ready method of diagnosis of diseases of the lungs and pleura, acute and chronic—a method only too "ready," indeed, for us to regard it as a sufficient guide to prognosis and treatment. If we turn to diseases of the heart, and the present-day study of the more common kinds and form of them for practical purposes, do we not find that the consideration which chiefly guides our prognosis and treatment is their origin: whether valvular disease is a result of rheumatism, or of syphilis or of mechanical stress; whether the "fatty heart" of former days is not degeneration due to alcohol, or to gout, or to sedentary living; whether the "idiopathic enlargement" of the last generation is not a mechanical and physiological outcome of the abuse of athletics? When we meet with aortic aneurysm, do not our thoughts travel at once to the *Spirochaeta pallida*, and from it to the physical stress that completed the damage of the aortic coats which it infests? What are tabes dorsalis and general paralysis, and a multitude of other forms of nervous affections which were formerly regarded as independent diseases, but acknowledged manifestations of the actions of a single cause—syphilis and its products? The name "anaemia," useful enough as a title, now conveys to our minds an idea that prompts us to examine the mouth for sepsis, and to ascertain the condition of the alimentary canal, of the genito-urinary organs, and, indeed, of all the mucous surfaces. A complaint of headache in a child at school at once suggests an examination of the eyes. And when a youth of poor physique and constitution is brought to us, our minds turn naturally to want of physical exercise and other unwholesome influences under which he has been reared in a town.

In these instances, which are but illustrative instances, and I believe I may say in most of our professional work, we appreciate the line of the principal and most promising advance at the present time, as compared with earlier but still comparatively recent periods. Physical examination, which was developed so remarkably in the first half of the last century, is still being advanced, particularly in the direction of exactness, by means of apparatus and the introduction of skiagraphy. Clinical chemistry also has been and is being steadily improved and extended. By these and other means, including examination of the blood, the actual pathological condition of affected parts can be investigated with far greater accuracy than before. But we do not rest now at this stage, which might be called the "anatomical" stage of diagnosis. We are not satisfied until we have pressed our inquiry a stage deeper, and done our best to discover in what the anatomical change of the affected organ originated. The minds of the profession will not rest until the cause of cancer has been found.

Incidental Influences on Disease in its Course.

From this somewhat lengthy discussion of the three orders of influences concerned in the causation of disease let me pass on to consider how its *course* may be shaped by influences of the same orders respectively, particularly by those influences which I have called incidental.

When we commence practice, inspired by the study of pathology, we are all disposed to regard illness, a disease in progress under our observation, as a manifestation of the actions of the essential cause of it only—of the tubercle bacillus, for example, of alcohol, of the spirochaete of syphilis. It is not long before we come to recognize abundant evidences of spontaneous relief, repair and recovery in the symptoms of the case, just as we recognized natural resistance in the origin of it. But it may require years of intelligent observation and consideration on our part to enable us to realize how large a part is played in every illness by altogether casual conditions and events.

A considerable proportion of the so-called "symptoms" of a disease are not strictly phenomena of the morbid process itself, that is, are not present in every instance of it, but are manifestations of some passing influence. The same remark applies to the phases of an illness, known as complications, relapse, and recurrence: they may usually be referred to extrinsic disturbances, possibly insignificant enough in themselves, which have afforded the essential cause—infective or not—a fresh opportunity to display its action. The food or feeding, the patient's room, his nurse, his relatives about him, the state of his bowels, the provisions for sleep, rest and occupation of mind, fatigue, a passing chill, and surely the medicinal treatment as well—all these are as much influences in determining the course of his case as was the original cause of it. There is no better test of a good practitioner than the possession and exercise of a faculty of observing and judging with correctness the effects of these incidental circumstances on the patient. The experienced doctor, as contrasted with the beginner fresh from hospital, knows that every passing event affects a case for good or for bad, and he never fails to give it its proper value in estimating the condition and prospects of his patient. He knows that, by keeping critical watch and firm control on the patient's surroundings, he may be able to modify favourably the progress of a case that appears altogether unpromising when regarded solely from the side of its essential nature. He has learned that it is with a patient, not with a disease, that he is concerned; with a process, not with a lesion. An attack of paroxysmal dyspnoea in the course of chronic Bright's disease he does not interpret as directly due to increase of the renal lesions in degree or in extent, but to careless indulgence on the part of the patient in meat or wine. He is prepared to find that return of pyrexia during convalescence from typhoid fever has been caused by a visit from friends, and is not a true relapse from reinfection. And it is because of his experience of the actions of extrinsic incidental influences in modifying the course of disease that the practitioner cautions the subjects of chronic quiescent appendicitis against exposure to cold and wet and fatigue.

Prognostic and Therapeutic Applications.

This consideration helps us to realize the bearing of the circumstances and events of our patient's life upon prognosis and treatment. In estimating the future we direct our attention to the diseased or damaged organ, but by no means to it alone. We ascertain and consider as correctly as we can the conditions under which the man's life will be spent, knowing that these will in great measure determine the course and termination of his case. As the prognosis of acute disease is largely based on the patient's past and on his present state, so the prognosis of a case of chronic disease is in practice mainly an intelligent forecast of the circumstances under which the subject of it will live. Take as an instance a case of valvular disease of the heart in a patient of fifteen. We are required to foretell the patient's future; in particular what is to be expected of him in respect of capacity for work, and the value of his life in terms of years. In framing our estimate of the patient's prospects we naturally take into account the form, situation and severity of the valvular lesion and the condition of the cardiac walls—all purely anatomical elements of prognostic value. But experience has taught us that a score of patients starting on equal terms in this respect, at the age of 15, have many different futures before them; and this not because of the actual disablement of the heart, which is the same in all, but because of the different influences which will fall upon the respective individuals. If we are to give useful advice to the boy with aortic disease, we must project our view of his case into the next ten years, and picture our patient surrounded by companions devoted to games and exercise in every form; and we estimate as nearly as we can the control of the lad's disposition in that direction that can be exercised over him. Next we anticipate the importance on the duration of his life of the choice he may make of a profession—laborious or sedentary, full of nervous stress or the reverse; for on this in great measure will depend the maintenance of cardiac compensation. We see him during the same period of early manhood exposed to the familiar temptations of social life, with alcohol, syphilis, and the other elements of irregular conduct and habits all ready to fall upon the damaged heart unfavourably. A little later we know that his reserve of strength will be tested by the concerns of his professional and domestic life, as well as by the many

sources of anxiety in connexion with his home and with making sufficient provision for his family. And when the question of the actuarial value of the patient's life is put to us—that is, in respect of the prospect of his survival to middle age and beyond it—our principal prognostic consideration relates to the position which the man will have won for himself by that period of his life, the conditions under which he may be expected to be working, the habits which from his present disposition, and judged by his inheritance, breeding, and upbringing, he will probably have developed, and the liability to early degeneration which may be learned in part from his family history.

This is but an illustrative statement, but it may serve to bring home to our minds the extent as well as the character of the interest that attaches to prognosis when it is based on an appreciation of something more than the findings of the *post-mortem* room and even the symptoms and signs present in our patient. The different influences that will surround our patient, and will tell on him for good or for evil, are forecasted, and, let me add, forestalled if possible, for in the proper appreciation of the prognostic conclusion lies the opportunity as well as occasion for preventive treatment. And this, let me repeat, is what the best type of family doctor understands and practises, passing his days amongst his patients, whose careers he helps to shape and to guide and to control by advice, by encouragement, by warning, by reproof if necessary, as well as by means of dieting and drugs.

Public Appreciation of the Doctrine of Causation.

Thus the practitioner of to-day has come to concern himself more and more with the constitutional soundness as well as with the present health of the persons under his care, and with the whole environment in which they live. One of the principal demands made on Medicine in these days is for an opinion—not in the individual case only, but in respect also of the community and the race—on the effect for good or for evil of modern civilization, as it may be studied and ought to be modelled, especially in our great cities. Even if the stimulus of the recent successes in general etiology and pathology, which I have attempted to put on record to-day, had been wanting, the force of public opinion at the present time would itself move the profession to search for the relations between disease and the common circumstances of the life of the people. Neglect of physical culture, overpressure in education, the wear and tear of professional and commercial life, insufficient attention to the nourishment and care as a whole of children, intemperance and debauchery, and the insanitary and otherwise unwholesome conditions in which the community often have to live and work, as their parents lived and worked—these, in their bearings on disease and degeneration, have come prominently to the front in connexion with eugenics, and, indeed, with many of the political controversies of the present hour. A cry has been raised, and is loud and clamant in this country, that we are the victims of modern civilization, which penalizes health and soundness, that the nation is degenerating, that the environment is ruining our constitutions. The practitioner of Medicine is expected to extend his active interest in health and disease, and in the influences that determine them respectively, beyond the strictly professional field. He is required to ascertain and to furnish for public information in the public service the materials of which our sanitary laws and regulations may be constructed.

In conclusion, let me say that I shall not consider that I have been justified in my selection of the subject of this Address, nor that I have done justice to it, unless I have convinced you that, much as has been done in the past, satisfactory as is the position that has been reached by Medicine in its progress along the line of investigation of causes of disease, much, far more, remains to be accomplished, and that a great part of it is waiting to be done by the family practitioner. Conviction of the importance of etiology must carry with it a sense of duty. We must not rest content with mutual congratulations on past achievements. There cannot but be many influences around us unfavourable to health and life remaining to be discovered by patient inquiry and observation. No doubt causes of disease lie concealed in many common things, and are associated with many common events. There is a natural disposition at the present time to leave investigation of this character to the bacteriologist. This is altogether unfair to him. I have already asked you to consider that it is unreasonable to expect the pathologist in his laboratory to solve other than certain classes of etiological problems. The remainder rests with ourselves. General practice is the most fruitful and promising field for the study of the natural history of disease in the living body. We who deal directly and immediately with the individual and with the community have opportunities which must not be neglected. What is more, we have that particular kind of opportunity which the scientist eagerly desires to command. We can vary the circumstances of our people's lives in the direction of improvement, and watch the experiment, and carry out a strictly scientific observation whilst effecting real personal and public benefit. And, over and above all this, who but the family practitioner can find and furnish the material from which the great problem of inheritance in relation to the causation of disease is to be solved? The student of eugenics collects such material laboriously, and laboriously works out results. The practitioner studies not the dead figures, but the living individuals in action. He sees the delicate, the unsound, the drunkard marry. He brings into the world children born of such parents. He has medical charge of the new generation throughout the earlier years at least of its precarious existence, and is often in a position to observe the event in its full development. Opportunities like these of connecting influences, direct and indirect, personal and inherited, with results, are afforded him only too abundantly throughout the community in which his practice lies.

The Association and Public Health.

Besides employing individual opportunity and individual effort, we may and we do advance this work collectively. The profession occupies a position, has contracted responsibilities, and acquired an influence in the country vital to the highest interests of the country. The British Medical Association as a body has never ceased to prove its concern for the national health and soundness, and has done its full share in discovering and dealing with the causes that underlie the inefficiency and degeneration of portions of the people. It employs the exceptional advantages afforded by its organization in the promotion of this object. We have a Standing Committee on Public Health. At the annual meetings, as on the present occasion, there is a Section of State Medicine. Every question, every public movement bearing on the subject of the health of the people, is examined closely in the JOURNAL. By these means and otherwise the Association takes an active interest in the pressing social problems of the time. I need mention only the medical examination and care of school children, physical training, the use and abuse of athletics, temperance, mental stress in education and in daily work, and the public provision of regular and sufficient relaxation and wholesome amusements for the people. Several of my predecessors in the honourable office which I occupy to-day have delivered themselves of clear and striking opinions on one or other of these subjects.

Thus, in the objects and achievements of our Association itself we see at work the spirit of the Medicine of to-day which I have attempted to unveil to you in this Address. Surely it is a spirit that is worthy of encouragement and support, whether it possess and move those of our number who devote so much of their time and powers to the organization and administration of this great Association, the enthusiastic pathologist in his laboratory, the physician in the wards, or the laborious practitioner in the remotest corner of the country or of the colonies.

AT a meeting of the Surrey County Council, held on July 26th, the resignation of Dr. Edward C. Seaton of the post of Administrative County Medical Officer of Health was accepted with regret and many kind and appreciative remarks. Dr. Thomas Henry Jones, Assistant County Medical Officer of Health and Education Medical Officer, was appointed in his place. Dr. Seaton was unanimously appointed Consulting County Medical Officer of Health.

Address in Surgery

DELIVERED AT THE

SEVENTY-EIGHTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

BY

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ON MALIGNANT DISEASE.

MR. PRESIDENT,—My first duty to-day is to tender to the Council of the British Medical Association my thanks for the honour conferred on me by the invitation to give the Address in Surgery at this great meeting in the metropolis of the empire. I should indeed be vain did I not realize that the Council by their invitation desire to honour not myself as an individual but rather the good work done by provincial men in advancing the science and art of surgery, a generous recognition for which I desire on behalf of my colleagues to express grateful appreciation. That I personally should have been chosen instead of others far abler for the duty imposed upon me is due, I feel, to the accident that I practise in the Midlands, the nursery in which this Association was born.

When one's mind is roving over the field of surgery, after the manner of those in labour with such a task as mine, naturally the first thing one has to grapple with is the difficulty of choosing a subject suitable for such an occasion as this. We have a gathering composed only in part of those who confine themselves to the practice of surgery, and largely of others occupied in different fields of special or general medical work. Under these circumstances it appears to me desirable to take some subject of general interest and deal with it in broad outline. Such a subject I hope I have found in Malignant Disease.

The great era founded on the genius of Pasteur and Lister, which has robbed surgery of so many of its anxieties and terrors, which has enlarged and illuminated our work in all directions, has extended its splendid influence over our knowledge and treatment of malignant disease. The revelation of bacterial and allied infections as the cause of so many diseases inspired the hope—indeed, I may say the expectation—that the origin of cancer would soon be laid bare. The veil is still unrent, the secret is yet hidden, and the world waits with painful interest for the revelations of the future. But whilst we realize our ignorance of the absolute cause, we must appreciate that our knowledge of the processes of malignant disease, of the struggle of the living organism against it, and of the means by which we may relieve or cure cancer, has advanced and is advancing in a most hopeful manner. Our position to-day is in marked contrast to that which obtained a comparatively few years ago; then the predominant view was that cancer was a systemic disease of which the tumour was the local manifestation, and removal of the evident growth was rarely regarded as anything more than palliative. This conception of the nature of cancer provided a disastrous example of the influence of bad theory on practice. It led in most cases to totally inadequate removal of the disease, the speedy return of which *in loco* was held to substantiate the belief that it was due to a blood dyscrasia. By clinical observation, by patient pathological investigation, and, more recently, by laborious observation and experiment on some of the lower animals, we have obtained, and are still obtaining, knowledge which is pregnant with power and which is far in advance of that in the hands of our immediate predecessors. We can only fully appreciate this when we review our position from the three sides—experimental, pathological, and clinical. In the time at my disposal I cannot hope to deal exhaustively with the huge field open to me, but must be content to address myself to three main considerations. Briefly, these are:

1. What experiment has taught us as to the growth of transplanted carcinoma and the methods by which immunity can be conferred on inoculated animals.
2. Our knowledge of resistance to malignant disease in the human subject.
3. The means available for its successful treatment.

RESULTS OF EXPERIMENTAL INVESTIGATIONS.

Appeal to experiment has given information to be obtained in no other way; interrogation of living tissues had become essential to supplement our knowledge of the mere histology of malignant structures, and incidentally has provided interesting parallels between the results of experiment and conditions exhibited in the human tissues. Experimental observations have been carried on in all civilized countries, but nowhere with greater ingenuity, or with more scientific acumen, than by workers under the Imperial Cancer Research Fund in this country. To the director of that research, Dr. Bashford, and to his colleagues, I should like to express my feelings of indebtedness and appreciation.

Let us first consider what we know of the growth of cancer. If portions of a carcinoma from one mouse are grafted into several other mice of a similar strain, a certain number of these grafts, but not all, develop and form malignant growths indistinguishable from the primary tumour, and will eventually determine the death of the inoculated animals. If the growth of these new tumours be investigated from day to day several points can be clearly shown. First, that the tiny nodule introduced grows by multiplication of its own epithelium and not by conversion of the cells of the host into carcinoma cells. Whilst the epithelial cells introduced are the source from which all others are formed, the part played by the tissues of the receiving host is of the utmost importance. The inoculated fragment consists of epithelium supported by a varying stroma of connective tissue, the two being blended in different proportions and on different patterns, producing carcinomas of varying type as we find in human beings. The fate of the epithelial cell I have already mentioned. What happens to the connective tissue of the stroma? It degenerates, dies, is removed by phagocytosis, and is replaced by proliferation from the connective tissue cells of the host, which new tissue speedily becomes vascularized, and so provides the intruded epithelium with nutrition. If this new production of stroma from the host does not occur, the epithelial cells die, and the inoculation of cancer fails. Thus we learn that experimental carcinoma is a parasite, the essential element the epithelium, living its own life, and using its host as a provider of nutrition through the new stroma and its accompanying blood vessels. But we learn also that, not content with exciting a production of new stroma and blood vessels to supply its needs, the epithelial cell so impresses the tissues in which it is implanted that a stroma is produced exactly similar to the stroma in the primary growth, be it of great amount or little, be it of one pattern or another. If the stroma of the primary tumour be highly vascular so that the growth is of the haemorrhagic type, this will be exactly reproduced by successful inoculation.

The interest of the experimental observations I have just related, intrinsically great as it is, is enhanced when we recall that this parasitism and this almost fastidious production of the new stroma finds a parallel in human pathology. In one of the most remarkable tumours of the human subject, chorion-epithelioma, we have an example of parasitism almost experimental in its nature. Chorionic epithelium derived from the tissues of the fertilized ovum—that is, from a new generation—grows into and transplants itself into the tissues of the mother, a being of a preceding generation. The primary growth in the uterus, and its metastases scattered widely by the blood stream through the body, determine the death of the host which the parasitic tumour has invaded. In the ordinary metastases of malignant tumours we have a process closely resembling that of experimental transference, particles of the primary growth swept into the lymph or blood stream, carried by one of these to any or all parts of the body and producing exact facsimiles in the metastases. If the primary tumour is a columnar-celled carcinoma of the intestine a replica of it may be produced in the brain, or if an ossified spindle-celled sarcoma of the femur, an exact bony reproduction of it may be grafted in the heart.

If the experiment of transplanting carcinoma from one mouse to another be repeated sufficiently often another phenomenon may arise—a no less remarkable occurrence than the production of a new form of malignant growth, namely, sarcoma, which develops side by side with and is closely blended with the introduced carcinoma. When

this curious observation was first described close criticism was naturally directed to it; the result was attributed to careless experiment, to the introduction of a mixed tumour into the new host, to confusion between malignant growth and the infective granulomata. The experimental production of sarcoma has now, however, been repeated so often and by such critical investigators that we must absolutely accept the fact of its occurrence. When a portion of carcinoma is transplanted the only tissue in it which survives is the epithelial cell, and we are driven irresistibly to the conclusion that the cell itself, or something contained within it, possesses such properties as to induce a malignant growth of different nature, of a new type, derived from the connective tissues amongst which the graft lies. Only very exceptionally is sarcoma thus produced, and this suggests that the connective tissues are not easily provoked to malignant growth, an observation which is in accord with clinical experience. Not only may sarcoma be produced by experimental transference of a pure carcinoma, but if the tumour of mixed strains be in turn transplanted the carcinomatous element may die out and a pure sarcoma eventually be propagated, or the sarcoma may prove the more agressive of the two as shown by its invasion and destruction of the carcinomatous tissue. An added interest is provided by the occasional occurrence in the human subject of mixed malignant growths, that is, sarcoma and carcinoma occurring in the same part or organ. A few such have now been placed on record, and they have this in common with the experimental mixed growths—that the sarcomatous element may prove the more active and malignant of the two as shown by its invasion and eventual destruction of the associated carcinoma.

Mr. President, in my earlier remarks I pointed out that experimental inoculation in some mice failed, although the animals were under exactly the same conditions as their fellows in which success was attained. We naturally inquire what this failure means, and from the experience of various investigators it seems possible only to attribute it to higher resistance on the part of certain mice, or, to put it in other words, to a degree of natural immunity. This being recognized, experiments were devised to determine if this natural resistance could be increased with the ever-present hope of being able to throw light on the problem of treatment in cancer of human beings. The results of these experiments show clearly that it is possible to increase the resistance to inoculation of malignant growths in mice and allied species. By repeatedly inoculating mice with a particular tumour a very high degree of immunity to that tumour can be attained, but this immunity does not apply to other malignant growths, at all events in the same degree. Protection against inoculation may also be provided by other materials than those derived from malignant tumours—for example, by a mixture of tissues such as an emulsion of mice embryos, or, better still, by using an emulsion of the skin of mice embryos or emulsion of spleen, both of which appear to give a high degree of protection, or by using blood the active powers of which have been shown to reside in the corpuscles and not in the serum. When we scan these experimental results closely it is evident that protection can be given only within narrow limits. The tissues used must be derived from the same species, or at least from those very closely allied; so with the blood—blood from the rat or rabbit does not protect mice. Again, the highest degree of protection is provided from tissues of a similar histogenesis—as, for instance, an emulsion of mouse skin provides the maximum immunity to inoculation of squamous-celled carcinoma in the mouse. In the endeavour to learn what produces immunity minute investigation has been made of the changes which occur in and around the grafted material, and though some of the details are still in dispute the following appear to be the essential points. Similar changes in the immune and in the normal mouse can be traced up to a certain time, that is, about the third day. In each case there is degeneration of the introduced stroma, and some necrosis of the central area of epithelium. Two views have been advanced as to what happens in the immune later than about the third day. According to the one, we find failure in the production of the new stroma and its accompanying capillaries, and according to the other, a new vascularized stroma does form. But whichever view is correct—and possibly both are in varying degrees of immunity—a few days later still a well marked reaction is established in the adjacent connective tissues. These tissues become infiltrated by young cells which surround, penetrate, and eventually strangle the implanted graft. This reaction of the areolar tissue, with the formation of scar tissue which destroys the implanted epithelium, is similar to the changes produced by the exposure of transplanted growths to the action of radium, to which I will refer later. It is also comparable to the destruction of cancerous emboli in blood vessels owing to the formation of scar tissue by proliferation from the endothelium, a process which has been observed not only in the lower animals but also in man. By whatever means immunity is induced, at the end of about two or three weeks the graft has disappeared by the activity of phagocytes.

Immunization by radium has at this time a special interest, and needs rather fuller consideration. If a portion of mouse carcinoma be exposed to the action of radium for a period insufficient to produce any structural change, gross or microscopic, and this fragment be subsequently inoculated into other mice, the inoculation fails, no growth takes place. The same result may be obtained in other ways, as, for instance, by breaking up the fragment of growth in a mortar, or by exposing it to a temperature of 98.6° F. for twenty-four hours. In mouse carcinoma which has been already established by inoculation exposure to radium causes some of the tumours to disappear, others continue to develop normally, and a few, perhaps, flourish more actively. Sections taken from the disappearing tumours may show haemorrhage where the radium had exercised its influence, but the most noticeable change is an active proliferation of the connective tissues, especially at the margin, and an invasion of the parenchyma of the tumours by young fibroblasts. As these complete their development they contract on, strangle, and destroy the epithelial cells they embrace. We have no evidence here of a direct specific effect on the epithelium of the growth which is found to be still actively proliferating. Some experimental observations made for me by Mr. Percival Mills show that similar changes may be induced by exposing the liver of a healthy mouse to the action of radium. The liver cells, as the carcinoma epithelial cells, undergo slight changes, which disappear in a comparatively short time. The connective tissue round the vessels and the endothelium of the vessels show marked activity and proliferation, which remain long after the hepatic cells have returned to their normal condition. We have, then, after the application of radium to implanted carcinoma only a formation of scar tissue such as may be observed in human lymphatics and blood vessels invaded by cancerous epithelium, and such as is seen in mice, in whom immunity to inoculation has been induced. Further experiments with radium have shown that cure of an inoculated growth exposed to its rays gives immunity to subsequent inoculations of carcinoma similar to that which is obtained from treatment with blood, skin, or other tissues. This immunity is not confined to the particular area involved by the tumour, but extends to the whole body. The quality of immunity thus induced may have its value in increasing the resistance of the body when once a process of cicatrization of a malignant growth has been set up in the human tissues by treatment with radium.

Immunity in general terms may be ascribed either to failure on the part of the introduced epithelium to produce its specific action on the living tissues in which it is embedded, or to a change in the connective tissues, which now fail to respond, owing to the action of the immunizing agent. This quality of immunity to inoculation has not been transmitted by heredity—the mice born of parents rendered immune are as liable to successful inoculation as are other mice—the mother mouse does not convey any protection through her milk to her offspring—no anti-cancerous serum can be obtained from the immunized animal.

As part of the whole picture I wish to place before you, I have endeavoured briefly to concentrate attention on some of the more important conclusions derived from the interrogation of living tissues by experiment on animals. Experiment has told us much of the growth of cancer, and of the means by which inoculated tumours may be

inhibited and cured, but it has nothing yet to tell us of the origin of cancer.

HUMAN RESISTANCE TO MALIGNANT DISEASE.

I would now turn to the second part of my theme, from experimental to pathological and clinical knowledge, both of which afford evidence of the struggle in the human subject between the tissues of the host and the parasite cancer. It is perhaps not clearly recognized that such a struggle exists; the tendency is rather to look upon cancer as a constantly progressive disease, neither halting nor wavering in its course. But there is evidence, both pathological and clinical, that the tissues do resist, that between them and the disease is a real struggle which occasionally ends in spontaneous cure. Striking evidence of this is afforded in the process of lymphatic permeation and subsequent lymphatic fibrosis, graphically described and illustrated by Handley in carcinoma of the breast and elsewhere. The tendency of breast cancer is to spread centrifugally from the primary growth into the lymphatics of the deep fascia around. The cancerous epithelium is observed pushing its way into the lymphatic vessels and extending more or less radially along them, not probably from any inherent attraction by those vessels, but because it finds in them the lines of least resistance. This is lymphatic permeation. With the growth of the epithelium the lymphatic becomes more and more distended until its walls rupture; a little haemorrhage may occur, and some reaction of the surrounding tissue. As a result fibrous tissue is produced, contraction follows, and the cancerous epithelium is strangled. This is lymphatic fibrosis. Unfortunately, whilst this reparative process is occurring at one part, with resulting formation of a mere fibrous thread, the distal point of the invading epithelium is thrusting still further along the lymphatic, and we have the picture of active invasion at the periphery, with recession and recovery at the proximal part of the lymphatic vessel. Similar resistance may be found in the blood vessels when cancerous particles become embolized into them, as is most easily demonstrated in the lungs. There tiny emboli may be found free in the blood stream or enclosed in a thrombus, which in part or entirely occludes the vessel. From the intima young connective tissue develops which surrounds the thrombus, penetrates it, and finally contracting, destroys the cancerous epithelium, remnants of which may in places be found in the thrombotic mass. Occasionally one of the cancer emboli may survive and grow through the vessel wall into the lung tissue around, producing there a metastasis; but this appears to be quite exceptional. Very large numbers of partially destroyed cancer emboli may be found in lungs when no metastasis visible to the naked eye can be discovered, and a perusal of M. B. Schmidt's work on this subject leads to the conclusion that this destruction of cancer emboli is not a mere accident, not an occasional happening, but a frequent occurrence, multitudes of metastases being thus cut short and prevented. Observations on mouse cancer have shown a similar secluding and destructive process inside the blood vessels of the lung, another illustration of the close similarity between the processes found in man and those produced experimentally in animals. What a curious comment on the old idea of cancer as a blood disease is provided by the destruction of cancer emboli in the blood vessels owing to the endothelial reaction set up by their presence! Or, again, by the immunity against successful cancer inoculation conferred by the injection of blood into a mouse.

The facts just related, together with the blood and lymph vascular arrangements in malignant tumours and the *post-mortem* findings in patients dead of these diseases, point clearly to the prevention of a large proportion of possible secondary malignant formations owing to the failure of particles separated from the primary tumour to graft themselves on to the tissues in which they are eventually stranded. Did this destruction not occur metastatic formations would be found earlier and in much greater profusion than *post-mortem* records show in the large majority of cases.

As we pass from microscopic to clinical evidence, we find resistance to cancer quite as clearly shown. Who amongst us has not felt sore disappointment at the ultimate recurrence of disease in a patient who by lapse of time, say from three to ten years, has been regarded as cured by operative measures? Some of these late recurrences may be examples of the development of new and entirely independent growths, but this explanation will not apply to others. The locality of the late development, the position it occupies with regard to the operation wound, the microscopic examination of the recurrence, practically leave no doubt as to the relationship between the original tumour and the cruelly disappointing appearance of the sequel. It is hardly possible to avoid the conclusion that minute foci of cancerous growths may lie latent in the tissues for long periods, not dying out entirely, not developing until favourable conditions arise of the nature of which we are at present ignorant. The most striking example of latency in my own experience was provided by a patient whose breast and axillary lymphatic tissue had been removed for carcinoma. Many years of freedom from recurrence appeared to give absolute security; yet eleven years after the operation, when the patient was in advanced age, she returned to show me a mass of carcinomatous glands, some below, others above, the clavicle. The patient was certainly free from evident gland infection at my last examination six years previously, and entertained no doubt as to the development of the gland mischief as late as ten years subsequent to her operation. The only possible explanation of such late recurrence appears to lie in a struggle between minute particles of cancer left at the operation and the tissues in which they are implanted. Resistance is sufficient to prevent development, but not to destroy the minute cancerous focus. Since cancer cells can thus be held in check for years, finally to become active, their eventual destruction in other and more fortunate cases is, to say the least, highly probable. I might, if time allowed, amplify the evidence of resistance to malignant growth by referring to the repair of spontaneous fracture in bones the seat of metastases, or to the disappearance of pressure symptoms when the spinal cord is involved by secondary growths, and so on; but this would not really carry the argument much farther. I suppose that every one who has closely observed the progress of malignant tumours has been struck by variations in the rate of development, at one time rapid, at another slow, the growth receding in one place, advancing in another.

If the evidence of struggle between the human host and cancer were to end here the story would indeed have a disappointing conclusion, as we should have to acknowledge final defeat. Happily we can carry the matter further and are able to claim an occasional victory on the part of the tissues over cancer. The occurrence of spontaneous recovery is perhaps oftener cited than verified, but after the most rigid scrutiny not a few cases remain which appear to be conclusive. If we submit these to analysis one of the most striking results is the frequency of recovery in chorion-epithelioma. This tumour is as intensely malignant as any which affects human beings; it may produce extensive local infiltration and widespread secondary growths, it may destroy life in a few months. If we examine the records of chorion-epithelioma reported to have recovered they appear to satisfy every requirement: portions of the growth were examined microscopically by competent observers, incomplete removal of the primary manifestation was acknowledged, the clinical evidence of secondary formations in the lungs was complete as shown by physical signs, by haemoptysis, and by dyspnoea. Yet spontaneous restoration to vigorous health followed with complete and prolonged absence of all signs of growth either in the primary or the secondary localities. Speculation on the cause of spontaneous recovery from chorion-epithelioma inevitably recalls to one's mind that it is really an implanted cancer and not one arising primarily in the maternal tissues. It provides, therefore, a parallel to inoculated cancer in mice, which in not a few cases may grow for a time and then disappear without treatment of any kind, whereas spontaneous recovery in mice the subject of carcinoma arising *de novo* is very rare.

Perhaps no more interesting example of apparent spontaneous recovery from cancer is recorded than the classic case observed by Pearce Gould. A woman with recurrent breast cancer, extensive gland infection, nodules in the skin, growth in one femur with spontaneous fracture, and signs of growth in the chest, reduced to death's door by her disease, is found four years later to have lost all signs of malignant growth save shortening of her femur from

the spontaneous fracture. Similar examples of complete recovery are recorded of malignant growths in the abdomen and other parts, but I must not trespass on your indulgence by referring to them in detail.

I would rather draw your attention to a very interesting question relating to patients who show high resistance to, and more or less spontaneous recovery from, carcinoma—this is, Have they acquired an immunizing power capable of being transferred to others the subject of cancer? This point, as far as I know, was first raised by Hodenpyl of New York, whose untimely death we have to deplore. He had under observation a patient the subject of carcinoma of the breast with extensive secondary formations. All the lesions disappeared spontaneously, and at the end of four years an extensive chyliform ascites alone remained. Hodenpyl hoped to find in the body fluids of this patient an immunizing agent transferable to other human beings. The ascitic fluid was first used experimentally on mice in which inoculated tumours are reported to have disappeared under the influence of the treatment. This led to the tentative use of the same fluid in carcinoma of the human subject, and a preliminary report speaks hopefully of the results attained. The full report will be awaited with interest, but one obvious criticism can hardly fail to be made. Experimental immunity has so far been obtained within very narrow limits, and the alleged successful treatment of mouse carcinoma by a fluid from the human subject appears to contradict practically all that has been hitherto demonstrated with regard to experimental immunity.

Of the absolute nature of the resistance to malignant disease at present we know little if anything. We cannot recognize the factor which heightens or lowers it, whether it be a chemical variation in the tissues or an influence produced through the nervous system, stress or anxiety perhaps exaggerating or exaltation diminishing the activity of the growth.

I think, however, we can recognize one striking feature in the destruction of the cancerous epithelium which is common to the experimental production of immunity, to the disappearance of growths under radium, to spontaneous recessive processes in the human body. This is the active part played by the connective tissues; we have an irritative overgrowth, with hyperplasia and subsequent contraction, which appears to determine the death of the epithelial cell.

TREATMENT OF MALIGNANT DISEASE.

I turn now to the third part of my subject, and trust, Mr. President, that I shall be pardoned for the demands I have made on the attention of the meeting in thus dwelling on experimental and natural processes in cancer. A just recognition of these appears essential for a sound judgement on the value of our methods of treatment and equally of importance in guiding us to future advances.

When considering the means available for the cure or the amelioration of malignant growths, certain modes of treatment by cancer serums, by drugs, and by enzymes may be disregarded as futile. The *x* rays have a real field of usefulness in relieving pain, in reducing the activity of inoperable growths, in healing rodent ulcers, if we are justified in including these amongst malignant formations. When, however, we examine the absolute curative value of this method of treatment, disappointment awaits us; personally, I have never known an unequivocal malignant growth absolutely disappear under the influence of *x* rays, though apparently others have occasionally been more fortunate.

Turning to another side of radio-therapy as provided by radium, it is necessary to speak haltingly, to avoid too enthusiastic hopefulness on the one hand, on the other too niggardly an acknowledgement of what radium as yet appears to have effected. We may clear the ground somewhat by immediately accepting radium as curative in rodent ulcer, with this reservation, that the permanence of cure must be certified by longer period of time than has yet elapsed in most of the cases treated. This reservation is absolutely necessary from our experience of late relapse after what has appeared to be cure by excision. If we scrutinize the results of treating growths which are undoubtedly malignant, as shown by progressive local invasion and by secondary formations in lymphatic glands or other parts, we find much that is promising but little that is conclusive. A profound impression is produced in many instances; malignant tumours of large extent and depth may disappear or much diminish. But the improvement and the apparent recovery is apt to be deceptive, and subsequent return of the growth which progresses to the death of the patient appears to be a not infrequent experience. Further, instead of recession, a more rapid evolution of the growth with generalization is not unknown. The difficulties in the way of treating malignant formations by radium are only truly appreciated when we recall the life-history and the methods by which malignant tumours invade local and distant parts. How can we with present methods hope to pursue these successfully with radium? If a patient is the subject of an inoperable tumour, we are grateful for the benefit radium may give in the relief of pain, in the cessation of discharge, in the cicatrization of an open sore, and we should rejoice if cure seems probable. But when called upon to treat patients with operable malignant growths, are we justified in advancing radium as a substitute for excision? Personally I would not at present take this responsibility. My main objection to the use of radium, even tentatively in such cases, is the constant danger of lymphatic and vascular dissemination which may occur in the period occupied by the treatment. My conclusion would for the present limit radium to the treatment of the least hopeful conditions until much wider experience has been obtained. I believe this will be best in the interest of our patients. It would also be of advantage, for the present, if treatment by radium were left in the hands of the few rather than the many. The cost of a really useful supply of the material, the uncertainty at present of the best methods of application, the real possibilities of doing harm as well as good, all combine to enforce the wisdom of this course. To those who have the means and opportunity, I would appeal for the fullest information possible. We need to know their final as well as their immediate results; we want such a description of the minute anatomy of the growth itself and of any secondary infections, together with illustrations if possible, as will leave no doubt in the minds of others as to the nature of the disease treated.

A brief time must be given to consideration of the treatment advocated by Dr. W. B. Coley, especially for sarcoma. His method was based on observation of the occasional cure of ulcerated malignant tumours by an attack of erysipelas. From this Coley has evolved his treatment by the toxins of the streptococcus of erysipelas intensified by an addition of toxins derived from the *Micrococcus prodigiosus*. I suppose that many of us have administered Coley's fluid during the last few years, personally I must confess to having done so in a rather half-hearted way; but Dr. Coley's recent visit to this country, and an opportunity of personal discussion with him, stimulated me to further interest in the matter, and for the past few months I have given his most recent preparation of the toxins a fairly extensive trial, mainly for inoperable sarcoma. Those who have read Dr. Coley's communications, and have met him personally, will, I am sure, agree with me in regarding him as absolutely honest in the presentment of his case, but the use of the mixed toxins in this country has not given such results as those attained by the originator of the treatment. Cure of sarcoma is occasionally recorded, the microscopic and clinical evidence being such as to demonstrate the malignant nature of the growth, but I am bound to say that such experience as I have made, whilst partially substantiating, does not yet fully confirm the optimistic views presented by Dr. Coley. I have used the toxins prepared under his directions and have endeavoured faithfully to follow his instructions for its use. As far as my observations go no harm has befallen any of the patients treated, though the treatment makes considerable demands on their courage and persistence. In the majority of my cases no improvement has been effected, but in others I can speak of improvement which promises cure if further lapse of time confirms the results at present attained. With such experience as I have made, I could not advise any patient with an operable sarcoma to adopt Coley's treatment, and I would dissuade him from it as a substitute for operation; but if operation were refused, or the growth were inoperable, I would certainly advise the use of the toxins, with the expectation that some patients would be greatly benefited, though at present I am unable

to discriminate and say which will benefit and which will not.

With every desire to use all means available which may relieve patients of the distress, anxiety, and possible mutilation which operation inflicts, with the belief that time will provide happier and gentler means than we now possess, I am compelled to say that at the moment we have to rely upon operative measures as the great remedy for malignant disease. Our limitations may be frankly acknowledged. Sometimes owing to inaccessibility, at others to the vital nature of the parts involved, often because of the fact that malignant disease is essentially the disease of advancing age, we are powerless, and sorrowfully have to recognize our impotence. But when all this is accepted, a great and expanding field is open to the surgeon. What are the results to which we can point? These may be considered, as they concern the patient's life, and as they promise cure of the disease. First, owing to the teaching of Lister and the constant improvement in technique, the mortality following operation in almost every region of the body has been, and is being, reduced in the most substantial degree. If we consider as an example the removal of the cancerous breast, which we may take as a type of the modern operation for cancer, what do we find? With the very extensive removals now effected, a mortality which ought not to be higher than 2 to 3 per cent., and has been by some operators reduced materially below this. If we consider the mortality after removal of carcinoma of the tongue, of the intestine or stomach, or after amputation of the extremities for sarcoma, we find a parallel reduction.

But what concerns us most closely is this—if the patient survives operation has he a fair prospect of being permanently relieved of his disease? Without relying upon Volkmann's teaching that three years' freedom from recurrence implies cure, we may recognize the infrequency of later return of the disease, and, if we assign five years as the period after which recurrence very rarely takes place, we may absolutely accept the curability of cancer by operation.

In cancer of the breast there is ample evidence of the truth of this statement, not from the results of one but from those of many operators, some of whom can show that from 40 to 50 per cent. of the cases submitted to operation are cured.

The results are not so satisfactory in other regions. If we take, for instance, cancer of the rectum, cure may be attained in a ratio of from 20 to 40 per cent., varying with the experience of the operator and the care with which he selects cases suitable for excision. Unfortunately, only a small proportion of the cases of carcinoma of the rectum is suitable for excision; the large majority at present can only be treated by palliative measures. In epithelioma of the tongue the results are not so good, though a much larger proportion of the cases is submitted to operation.

One could pursue this possibility of cure in practically every region of the body, but I am here only concerned to show in a general way that cure can be effected by operation—a fact not yet, I believe, so fully accepted as it should be by the members of our own profession, and certainly not by the public at large. This at once raises the question, If cure is attained in some cases, why not in many or in all? What are the factors responsible for failure? or, to put the question in another way, What are the resources we may adopt to better our present results? We need an increased knowledge of the life-history of the various forms of malignant growth and the exact method of extension of each in the various regions of the body. Thus we shall learn whether gland infection is early or late, on which groups of lymphatics to concentrate our attention, which tissues in the locality of the growth must be most widely extirpated. We need also to make our operations as thorough as the conditions permit. Only one real opportunity of cure is offered—it is at the first operation, and this should be pressed to its fullest extent. For instance, in carcinoma of the breast a palliative operation may occasionally be performed for an ulcerated or bleeding growth, but with this exception nothing excuses, in an otherwise healthy patient, a mere excision of the breast for carcinoma without simultaneous extirpation of the lymphatic area which has been shown to be specially liable to invasion. Amputation of the tongue, even in the earliest stage of epithelioma, without extirpation of the appropriate gland area, either at the time or immediately after, is a dereliction of a plain duty. Amputation at the shoulder-joint for a sarcoma high up the humerus, instead of an interscapulo thoracic amputation, is a positive invitation to local recurrence.

But when we have learnt all that there is to know of the life-history and extension of malignant growths, when we have adapted our operative measures to the most thorough extirpation possible, we still have left a third factor, more important than either in its bearing on the cure of cancer—early recognition of the disease. In that direction is our great hope for the future. In the earlier stages, before it has interfered with the functions of organs, cancer is generally a silent disease. This is at present our genuine excuse for failure to recognize the disease at its beginning, but the excuse often does not apply. Who amongst the operating surgeons here to-day has not frequently to deplore the time wasted between the first observation of a suspicious symptom—swelling or ulcer—and the removal of the disease, which has been postponed to a time when the expectation of cure is reduced to shadowy proportions? The responsibility for delay falls partly upon us as a profession—we are not penetrated by the firm belief, the certain knowledge, that cancer is curable by operation, and that the early and not the later stages of the disease provide the great opportunity. We fail to urge special methods of investigation by instruments of precision, by radiography, by exploratory incision, or even by prophylactic excision. The responsibility for delay is, however, only partly ours. The public, in dread of a diagnosis of disease for which they still think there is no real remedy, often conceal their fears and their disease until what they dread has come about—a stage of malignant growth almost or quite hopeless of cure. Or, in ignorance of the great benefit which surgery can confer on them, they submit themselves to vampires, who prey upon their credulity, and exploit them in the most cruel manner.

Nothing is more mortifying to the surgeon than to find, after the successful local extirpation of the disease, that his patient is doomed by secondary growths in other parts of the body. Take, as examples, two very diverse conditions—epithelioma of the tongue and periosteal sarcoma of the femur. In the first case the patient remains free of disease in the mouth to die of gland invasion in the neck; in the second the amputation flaps are free from recurrence, but the patient dies of secondary growths in the lung. The explanation is, of course, the same in both cases—surgical interference has arrived too late. A few months, a few weeks, or even a few days earlier, the secondary invasion might have been anticipated and a successful local removal converted into a complete and permanent cure of the disease.

I believe it is literally true that if all malignant growths could be excised at a certain stage in their development all could be cured. I have mentioned our great difficulties in the pursuit of this counsel of perfection. For the sake of our suffering race we pray, we hope, that our present limitations will be removed, that means for interrogating the body as to the presence of malignant disease in its early stage will be provided by the ever-increasing band of devoted workers in biological chemistry. Finally, we look forward to a time when the distress and anxiety inflicted by resort to operative measures may be substituted by gentler means provided by the sciences of biology, physics, and chemistry, to which we owe an ever-increasing debt of gratitude.

UNDER the will of the late Right Rev. Edward King, D.D., Bishop of Lincoln for twenty-five years, Lincoln County Hospital receives a bequest of £500.

PROFESSOR HENOCH, who for many years was at the head of the department of children's diseases at the Berlin Charité, celebrated the completion of his 90th year on July 16th.

THE Congress of German Scientists and Medical Practitioners will hold its eighty-second annual meeting this year at Königsberg. A novel feature will be an excursion, starting from Swinemünde on September 5th, going on to Wisby, Stockholm, Helsingfors, Wyborg, St. Petersburgh, and Riga, and ending at Pillau on September 18th.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE OEDEMA OF THE LUNGS TREATED WITH BELLADONNA.

F., a carpenter, aged 47, spare, abstemious, and somewhat gouty, had his last attack of gout, not very acute and of the classical big-toe kind, about a year ago; it followed some influenzal symptoms, which had left him with a quickened heart, but with no obvious dilatation or bruit. The rapidity subsided, after a few months, sufficiently to allow of his resuming work, though with misgivings on my part.

At 11.45 p.m. on March 11th I was summoned urgently and I found him apparently *in extremis*. The friends stated that he had been quite well throughout the day, and had done his day's work as usual, only complaining once or twice of a slight and transient shortness of breath. Acute shortness of breath and cough, with no localized pain, had seized him less than two hours before sending for me. He was pale and in a cold sweat, with rapid respiration; the accessory respiratory muscles were in action, and he was sitting up and leaning forward, evidently suffering from severe dyspnoea. The pulse was uncountable at the wrist, the heart beat 125, counted with difficulty. On making such hurried examination as his state allowed, I found moist râles everywhere over the chest, back and front, such râles as one might find in laryngeal obstruction, but this could be excluded by the absence of stridor. No proper examination of the heart was possible, partly owing to these râles, partly to the patient being unwilling to abandon his leaning-forward position. Percussion over the left back did not reveal any dilatation of the ventricle.

From time to time the man coughed up a peculiar, fine-bubbled froth of a pinkish colour. The froth resembled the "head" on a glass of ale, and this association recalled to my mind a clinical note in the *Lancet* of July 18th, 1908, page 158, by Mr. Charles E. Denning, who narrated an almost exactly similar case, but of greater severity, and terminating in death. Dr. Denning was especially struck by the characteristic froth, "exactly like beer froth." He refers to a paper by Dr. Leonard Williams in the *Lancet* of December 7th, 1907, page 1606, on "Acute Pulmonary Oedema." It was this froth, and the benefit of Mr. Denning's note, which gave one the key to the diagnosis of acute pulmonary oedema, a conclusion fraught with scant comfort as I recalled the end of the case just mentioned.

Having some liq. strych. with me, I injected 8 minims hypodermically, made up a mustard plaster and applied it over the root of the lungs, and applied frequently changed fomentations over the praecordium. Meanwhile messengers were dispatched for an oxygen cylinder which happened to be in the village, but which turned out to be nearly empty. Several drachms of brandy were given every ten minutes, and hot bottles packed about the patient.

No improvement, but steady worsening, was observable after an hour of this, when another strychnine injection was given. There was no appreciable benefit; and, indeed, his state was so alarming that the friends asked me to draw up a form of will for him to sign, which I did. It still awaits probate.

The use of belladonna in checking pulmonary secretion then occurred to me. The man was rapidly going downhill, and I felt that time would not allow of the exhibition of the drug in repeated doses; what was given must be almost toxic in dose. I returned to my house, taking advantage of this to look up the "lowest fatal dose," and subsequently injected hypodermically 20 minims of a glycerinated tincture, fearing that the alcoholic tincture might cause abscess. As after half an hour no toxic effects had developed, and there seemed, if anything, a slight improvement and a lessening of the frothy spit, taking my courage in both hands and concluding that the patient would bear large doses of the drug, I injected 15 minims more. In another half-hour the breathing was obviously quieter and the man more easy, the froth being much lessened. The improvement was steadily maintained.

The only prominent effect of the belladonna as regards toxicity was dryness of the mouth, but even this was not extreme. Cycloplegia was very slight, the patient recognizing features close to him the next day. (His exhaustion forbade testing with types.) The tincture was made from a standardized extract; indeed, it had set up mild delirium not long before when used in 5-minim doses in a susceptible subject.

In six weeks he was back at his work, though the heart was not free from suspicion of dilatation. I examined him on June 2nd, 1910. The lungs were clear of adventitious sounds. The heart showed decided signs of dilatation; outer dullness ¾ in. outside nipple line, blowing systolic murmur at base, conducted down sternum and over the apex-beat region, which latter showed a diffused impulse; murmur inaudible in axilla or at angle of scapula; blood pressure, two estimations, about 100.

I venture to record this case owing to the effect of the belladonna in the treatment of the condition.

Histon, Cambs. L. GWILLIM DAVIES, M.D.Cantab.

THE VALUE OF CELLULOID IN CERTAIN SURGICAL PROCEDURES.

LATELY I have used celluloid for certain surgical conditions for which its suitability seems to be overlooked. To my mind it seems superior in many cases to silver wire or metal structures, and as time goes on it may have a more extended sphere of application and usefulness. The celluloid employed is the sheet form used by photographers for glazing prints. A plate of this material, riddled with punch holes, is readily prepared, and forms an excellent filigree for the radical cure of large inguinal and ventral herniae, as well as for insertion in trephine holes in place of the excised bone. The following cases illustrate its use:

CASE I.—This was the first in which I employed it. The patient was a boy with recurrent appendicitis. He had been operated on by another surgeon six months previously for appendicular abscess. The abscess had simply been drained, and no search made for the appendix. At the site of the subsequent scar there was some bulging and marked thinning of the abdominal wall. The offending organ was removed, and in the process of sewing up the wound I inserted between the internal and external oblique muscles a perforated celluloid plate so as to cure the commencing ventral hernia. The patient made a good and perfect recovery. Examination six months later showed that the plate had undergone little if any absorption.

CASE II.—This patient was a man aged 57, who had been troubled with a very large inguinal hernia for many years. Here two plates, one over the other, were placed in the inguinal canal, the cord being passed down a linear cut in the plates to a central ring for its reception, so that it passed from the internal ring straight through these barriers, and lay on their anterior surfaces for the rest of its course. Progress here was excellent and uneventful, and the patient was discharged from the Kimberley Hospital three to four weeks after operation. His condition was excellent, and in every way satisfactory when seen again two months later.

In a third case celluloid was successfully utilized for bridging the gap of a trephine hole. Here a piece of the material cut so as to fit the hole firmly, and containing a small central aperture for drainage purposes, was securely fixed in the gap and pressed down close to the dura mater. The plate was cut so as to accurately fill the gap, being gripped by the cut free margin of the inner table, and just level with the inner aspect of the calvarium, so that the internal surface of the skull again presented a smooth surface.

The patient was a man, aged 40, who received a skull injury whilst working in the De Beers Wesselton Diamond Mine. The bone was extensively fractured, and the membranes and brain lacerated. A large piece of depressed bone was removed from the substance of the brain. After suturing the dura almost completely the celluloid plate was inserted in place of the excised piece of bone. Healing by primary union followed, and, after recovery from the anaesthetic, the patient had an uneventful and rapid convalescence. Within three weeks he was discharged from hospital, and is now working again as though nothing had happened.

No pulsation whatever could be felt over the wound, and, as was also evident, good protection was afforded the subjacent brain.

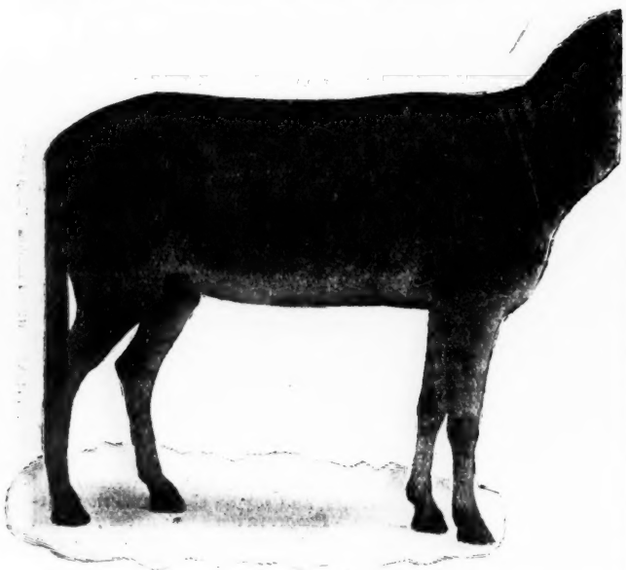
I certainly think that celluloid could be used to replace bone after trephining operations with great advantage in many ways in suitable cases. Other spheres of usefulness may also occur. Perhaps it might be utilized, for instance, in plastic operations on the nose to form a rigid basis for the formation of a new nose.

Kimberley, S.A. G. S. THOMPSON, M.R.C.S., L.R.C.P.

LEUCODERMA AND PALAEOGENESIS.

IN the BRITISH MEDICAL JOURNAL of April 23rd Sir Jonathan Hutchinson explains the dappled skin of leucodema as a revelation of a pigment pattern pre-existing in the skin. Both to medical men and to biologists his explanation will be of great interest. The curious mottled appearance may well be accepted as atavistic; but the complete truth appears to be much more wonderful than that.

Biologists have taught that every animal in the course of development climbs up its own genealogical tree; indeed, the leucodermic "patient" climbs both up and down it, if one claim him as a reversion to ancestral type. The human embryo exhibits the gill clefts of a long-vanished fish ancestor; in the early stages there is little difference between the fetus of a lizard and that of a mammal. Each of us has a larynx dimpled by the ventricles of Morgagni—the last remnants of a howling organ; the occasional presence of a scansorius muscle recalls the epoch when climbing was a necessary accomplishment. Similarly, the dusky skin of primitive man reappears in leucoderma; in some instances the ingestion of arsenic appears to "develop" a sepia-coloured "eruption" on a clear skin as a negative is developed on a photographic plate. The *white* areas of leucoderma appear capable of a still more singular explanation.



Eimer's theory. Transformation of body stripes into indefinite lines and mottling, as seen in the quagga in the Artis Museum, Amsterdam. The degeneration progresses from before backwards.

In mammals which are variegated when young, self-coloured in maturity, a remarkable sequence of coloration has been traced by Eimer. The stages appear to be: (1) Longitudinal stripes, which break up into (2) rows of spots. These spots develop (3) cross stripes, which fuse to constitute a mottled network. (4) Self-colour is then obtained by the interstices of the network becoming suffused with the superposed colour, thus drowning the ground tint.

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The child was obviously very ill, and if disturbed cried out; the mental condition was, however, quite clear, all questions being answered without hesitation. The head was slightly retracted, and there was stiffness of the posterior group of neck muscles, movements of the head causing much pain. The abdomen was retracted, but there was no palpable enlargement of the spleen. Reflexes were quite normal, and there was no paralysis nor loss of power, spasm or twitching of the extremities, no *tache cérébrale*, no inco-ordination on rapid rotation of the hands. The chest on examination revealed no physical signs of disease. No headache was present, but there had been severe occipital headache a week previously. The temperature was 103°, pulse 100, rapid and rather soft. The pupils were equal and reacted to light; no squint nor nystagmus. Mr. Bickerton, who kindly examined the discs, reported both to be hazy on the inner side, but vessels were normal in size, and probably there was no neuritis.

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The right ear showed bulging of the posterior superior meatal wall, and the middle ear was seen to be full of cholesteatoma. There was no swelling or tenderness over the mastoid process, but just over the mastoid emissary vein there was slight oedema which extended back over the sinus for about ¾ in. There was no tenderness on percussion over temporal region, but this was present just behind the mastoid process. The superficial veins

were not distended, and there was no tenderness or swelling along the course of the internal jugular vein.

Operation.

An immediate operation was decided on, and as soon as the ear had been turned forward and the outer shell of the mastoid process removed a large mass of cholesteatoma came into view, which on being removed was seen to be the size of a small plum. The mastoid process had been compietely hollowed out by this mass, and the middle ear was also found to be full of the same material; no ossicles could be found—in fact, the disease had almost performed a complete mastoid operation, only the "bridge" being left; this was removed.

The middle fossa was extensively exposed, but the dura mater was quite normal, and there was no bulging; posteriorly the lateral sinus was exposed, and the wall was white and very unhealthy looking. The inner wall of the middle ear was quite intact. There was no caries of the external semicircular canal.

As from the condition of the wall of the sinus and the history of the case (rigors, vomiting, and high temperature) the child was obviously suffering from lateral sinus thrombosis, the jugular vein was tied in the neck before any treatment of the sinus itself was undertaken. The sinus was then opened and the clot removed, and the bleeding from upper end controlled by packing. The post-auricular wound was left open, the wound dressed, and the patient sent back to bed.

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1. Where the thrombosis is limited to the wall of the sinus, and does not completely obstruct the lumen, it is quite possible for the needle to be passed through the clot and to draw off fluid blood.

2. The insertion of the needle may detach pieces of clot, and produce the very condition which the prompt treatment of these cases is supposed to prevent—namely, pyaemia.

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Palpation of the sinus is also, I am sure, a very dangerous procedure, as it will often cause pieces of clot to become detached and carried away as emboli.

In cases of doubt, where the appearance of the sinus wall and the symptoms make it impossible to distinguish between a case of thrombosis and a case where the patient is simply suffering from absorption from an abscess round the sinus, it is better to watch the case carefully (when the occurrence of a rigor or a high remittent temperature are indications for the ligature of the jugular vein and the opening up of the sinus) than to open the sinus as an exploratory operation before ligature of the vein.

A very interesting point is the fact that the culture taken revealed the presence of the Klebs-Loeffler bacillus in almost pure culture; the child was therefore isolated and the usual treatment with injections of antidiphtheritic serum was carried out.

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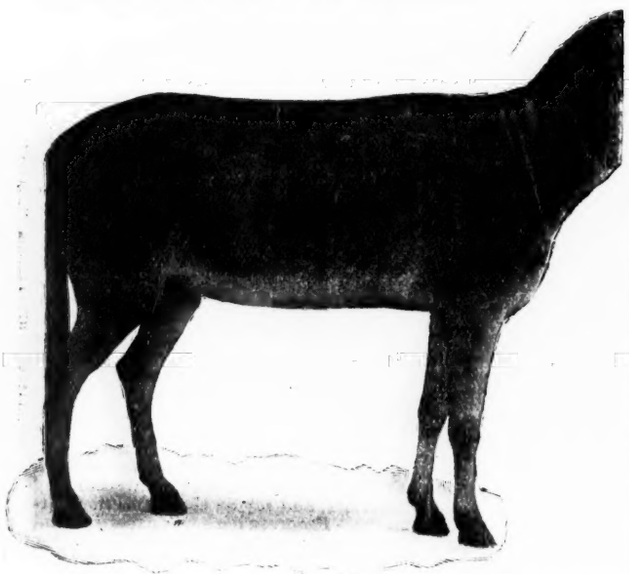
LEUCODERMA AND PALAEOGENESIS.

IN the BRITISH MEDICAL JOURNAL of April 23rd Sir Jonathan Hutchinson explains the dappled skin of leucodema as a revelation of a pigment pattern pre-existing in the skin. Both to medical men and to biologists his explanation will be of great interest. The curious mottled appearance may well be accepted as atavistic; but the complete truth appears to be much more wonderful than that.

Biologists have taught that every animal in the course of development climbs up its own genealogical tree; indeed, the leucodermic "patient" climbs both up and down it, if one claim him as a reversion to ancestral type. The human embryo exhibits the gill clefts of a long-vanished fish ancestor; in the early stages there is little difference between the fetus of a lizard and that of a mammal. Each of us has a larynx dimpled by the ventricles of Morgagni—the last remnants of a howling organ; the occasional presence of a scansorius muscle recalls the epoch when climbing was a necessary accomplishment. Similarly, the dusky skin of primitive man reappears in leucoderma; in some instances the ingestion of arsenic appears to "develop" a sepia-coloured "eruption" on a clear skin as a negative is developed on a photographic plate. The *white* areas of leucoderma appear capable of a still more singular explanation.



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[2] *Abhandlungen aus dem Gebiete der Geburtshilfe und Gynäkologie: Mittheilungen aus der Zweiten Frauenklinik der König. Ung. Universität zu Budapest.* Herausgegeben von Professor Dr. W. Tauffer, Direktor der Klinik. Band I, Heft 2. Berlin: S. Karger. 1909. (Sup. roy. 8vo, pp. 141. M. 3.)

in respect to the new anaesthetic. Both writers tell the medical public just what they expected to hear about these novelties, yet it is very advisable that experts should let the practitioner know how much the success of a new method depends on trained surgeons and well-drilled operation-room assistants. The establishment of cottage hospitals and the great increase in the number of trained nurses is an encouragement to the practitioner to adopt methods at first only safe in great hospitals. The two remaining essays dwell on matters depending more on the moral duty of the surgeon and his dexterity than on the circumstances and surroundings of the patient, for hysterectomy is widely performed and the ureter may be wounded, and therefore demand repair, in the course of operations, whether undertaken in the palace, the hovel, or the cottage, in the city, the distant moor, the mountain valley, or the desert. Dr. Paul von Kubinyi discusses the technique of difficult abdominal hysterectomies, using the plural in his title, as he speaks of several operations and methods and reviews their merits. He rightly points out that the great progress in aseptic surgery, marked even since the last years of the nineteenth century, must modify our reasoning and our practice. Not only are many methods then perilous now safe, but it does not follow that because they are safe they are necessarily the best procedures. He concludes that Kelly's, Chrobak's, and Doyen's operations all indicate how the uterus should be amputated under different circumstances, but no special method is the best for every case. He quotes Reverdin's saying: *L'homme a toujours eu cette étrange manie: Il faut une formule à son petit génie.* Unfortunately the gynaecologist has always had a strange mania for relying on an authority's name as guaranteeing the excellence of an operation. Dr. Scipiades contributes a paper on the management of wounds of the ureter inflicted during abdominal section—ugly complications most trying to the operator; nephrectomy appears to be the safer course when the injury has been overlooked and the patient has recovered, as plastic operations on the ureter and bladder may aggravate the complication. In conclusion, we may say that this instalment of Professor Tauffer's *Abhandlungen* may be read with profit by the British medical public for reasons which we have endeavoured to explain in this notice.

Without doubt the *Atlas zur mikroskopischen Diagnostik der Gynäkologie*, edited by Dr. JOLLY,[3] is excelled by none of the other similar publications issued recently in Germany. The editor has chosen for his publishers the firm which is at present undertaking the fine *Enzyklopädie der mikroskopischen Technik*, edited by Ehrlich, Krause, and other eminent teachers, the second edition of which is now appearing in parts. The work under review is of a similar character, save that it is essentially for instruction whilst the *Enzyklopädie* is for reference. This atlas is published in book form, the illustrations not being relegated to a portfolio. They appear in colours on paper with a black border, and are pasted, in pairs, on stouter paper, opposite the explanatory paragraphs. In order to avoid an inconvenience familiar to those who study from atlases, those paragraphs are in nearly every case confined to the side of the sheet opposite the illustration, so that the reader need not turn over a page whilst inspecting it. The introduction consists of directions for the preparation of sections; it is terse and clear, but presupposes a general knowledge of the use of the microscope on the part of the reader. The illustrations are clear, and the colouring highly successful. Such is especially the case with the series illustrating adenoma, cancer, and chorion-epithelioma of the uterus. A good section of the uterine mucosa, where some of the glands have been divided obliquely, is included to show how their cells may appear as though malignant changes were in progress; this deceptive appearance, as Dr. Jolly remarks, is to be seen where endometritis has occurred, and involutions of portions of the walls of the enlarged glands into their own lumen has developed. The coloured lithographs of sections displaying the changes of the endometrium in different forms of endometritis are undoubtedly instructive, and the author very properly heads the uterine series with a high and a low power representation of a section of normal endometrium. We may observe that it would have been well had he added similar illustrations demonstrating the normal appearances of the epithelial covering of the vagina and vulva and the subjacent tissues. Dr. Jolly impresses on the reader, both in the explanatory text and in his preface, the importance of studying abrasions and worse destructive processes under the microscope. For her drawings the artist, Mrs. Ehlers, deserves the graceful recognition awarded her by the author. British publishers might inspect with profit Dr. Jolly's *Atlas*, as well as certain American pathological works, especially of the Baltimore school, and compare them with English publications of the same class, which, to say the least, hardly excel their foreign equivalents.

[3] *Atlas zur mikroskopischen Diagnostik der Gynäkologie nebst einer Anleitung und erläuterndem Text.* By Privat Dozent Dr. Rudolph Jolly. Oberarzt der Königl Universitäts—Frauenklinik zu Berlin. Berlin and Vienna: Urban und Schwarzenberg. 1910. (Sup. roy. 8vo, pp. 94; 52 farbigen Lithographien und 2 Abbildungen. M. 17.50.)

SURGERY.

General Surgery[4] is the title of a little book edited by J. B. MURPHY, of Chicago, for the ten annual volumes in the Practical Medicine Series on the preceding year's progress in medicine and surgery. Other works of the same class are numerous enough, but this series need not fear its rivals overmuch. It has the advantage of small compass possible only where the various departments of practice are published in separate sections. The editor has aimed, not at the production of a literary masterpiece, but at sifting current literature for the benefit of busy surgeons, and enabling them to keep abreast of the times without the expenditure of unnecessary time and labour. It is surprising how thoroughly the work has been done, and with what discrimination the inevitable selecting had been carried out. Naturally, such a piece of work as Mayo's on resection of the colon obtains much space; a new sign like that of Moszkowicz for determining the extent of arterial obliteration appeals to the editor's passion for exact diagnosis; Keetley's arguments in favour of preserving the vermiform appendix are fully set forth; McGavin's filigree method of dealing with the radical cure of large herniae is described in detail; new operations such as that of Shoemaker for reconstitution of the sphincter ani of course find a place; work on the pancreas, the parathyroids, on vascular surgery, and so on; these and a thousand other matters are reported, very often in the actual words of the original articles. An extremely valuable little book for every surgeon's constant reference. The author's brief introduction contains sanguine anticipations of great advances in the near future by the development of serum and organo-therapy, and the recognition of hidden sources of septic infection as the origin of many disease processes now regarded as primary perversions of function.

[4] Practical Medicine Series, 1909. vol ii: *General Surgery.* Edited by J. B. Murphy. Chicago: Year Book Publishers. 1910. (Cr. 8vo, pp. 614. Illustrated. 8s.)

NOTES ON BOOKS.

Remedia-Hoechst is a volume of nearly 800 pages, giving (in German) information concerning about fifty chemical products and a dozen serums made by the firm Farbwerke vorm. Meister, Lucius, and Brüning, who publish the book, and whose London house is 51, St. Mary Axe, London, E.C., inform us that they will send a copy free of charge to any medical man writing for it. The information given in the book for each substance falls mostly under the heads of method of preparation, chemical and physical properties, tests for identity and purity, pharmacology, and therapeutics; the last, under the heading "Klinisches," makes up the greater part of the matter, and consists of extracts from papers published chiefly in the Continental and American medical journals.

SLEEPING SICKNESS.

Bulletin No. 18 of the Sleeping Sickness Bureau,[5] by Dr. BAGSHAWE, contains an interesting paper on the transmission in nature of *Trypanosoma gambiense*. In Rhodesia and Nyasaland during the last twelve months, trypanosomiasis has been detected in twenty-eight persons, some of whom had certainly never visited a *palpalis* area. Two areas or valleys seem to be implicated, and Dr. Bagshawe believes that one is not justified in assuming that *Glossina morsitans* or *fusca* are doing the mischief there. It is possible that some other agent of which we are unaware is the cause, a tick or mosquito, for example.

[5] London: Sleeping Sickness Bureau, Royal Society, Burlington House, W.

Experiments only can decide the matter, and all will agree with the author of the paper that these should be put in hand without delay.

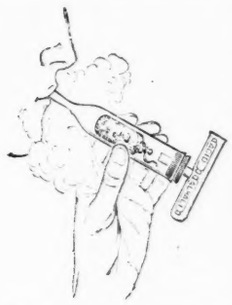
Lieutenant-Colonel A. BUCHANAN, I.M.S., has just published in pamphlet form his well-known views on "cats as plague preventers."[6] The description of the village of Airla is very striking, and there is not the slightest doubt that, if there are plenty of hungry cats about, there will be very few rats. According to the author, it does not follow that because an animal is subject to plague it therefore spreads the disease; and he also states that the cat flea does not carry plague as the rat flea does. The cat can, of course, catch the plague, but the disease usually takes the form of chronic plague, attacking the glands of the neck, which become swollen. If the assertion that "a cat will not kill a rat that is suffering from plague" is true, then this will necessarily limit the chances of infection of the former, and on the whole there is no definite reason to believe that the cat will spread plague or help in its spread. One agrees with Lieutenant-Colonel Buchanan that the cat is a valuable means of keeping down the rat, and that its presence will therefore act as a preventive of plague.

[6] *Cats as Plague Preventers.* By Lieutenant-Colonel A. Buchanan, I.M.S., Civil Surgeon, Amrasti. Copyright. Printed at the Pioneer Press. Allahabad. 1909.

MEDICAL AND SURGICAL APPLIANCES.

Ammonium Chloride Inhaler.

ANOTHER inhaler has been added to the many varieties already upon the market, under the title of "Vaporole" Ammonium Chloride Inhaler. It is introduced by Messrs. Burroughs Wellcome and Co., and has the advantage over other appliances we have seen that there are no bottles containing acid to be carried about. The requisite quantities of acid and alkali are made up in separate glass cylinders similar in construction to the well-known amyl-nitrite capsules. The whole apparatus, box included, can be carried in the pocket practically ready for use. The quantities of acid and alkali in each capsule are arranged so that a perfectly neutral vapour is obtained. The volume of ammonium chloride obtained is, however, hardly as full and free as one would wish.



Vulsellum Catch Forceps for the Removal of Imbedded Tonsils.

Dr. HERBERT TILLEY, F.R.C.S. (London), writes: The accompanying illustration depicts the forceps which Messrs. Mayer and Meltzer have made to my design for assisting in the removal of large tonsils which do not project beyond the level of the faucial pillars. Even when

pressure is applied from without, the "guillotine" will only succeed in removing slices of the tonsils, and will not get rid of the upper portion, which is intimately associated with the supratonsillar fossa, a region in which many of the acute and most of the chronic inflammations of the tonsil take their origin. By means of these forceps the enlarged gland can be securely seized and drawn inwards and forwards, while with scalpel or scissors the faucial pillars may be freed from the gland substance, its capsule entered and the tonsil more or less turned out of its bed. When thoroughly freed from surrounding structures, the ordinary guillotine or tonsil snare may be slipped over the forceps and the tonsil completely enucleated. The advantages of the instrument are that it is slightly curved towards the claws, so that the surgeon's view is not obstructed, as is the case with a straight instrument, and that once the tonsil is securely grasped it is not released until the operation is completed—a great advantage over the old vulsellum forceps with scissor handles.

THE ROYAL COMMISSION ON THE POOR LAWS AND RELIEF OF DISTRESS.

THE CARE OF PAUPER CHILDREN IN SCOTLAND.

THERE has just been issued the twenty-third appendix volume to the Report by the Royal Commission on the Poor Laws and Relief of Distress on the condition of the children who are in receipt of the various forms of Poor Law relief in certain parishes in Scotland.

This supplementary report[1] has been prepared by Dr. C. T. Parsons, Medical Superintendent of the Fulham Infirmary, and Medical Officer of the Fulham Workhouse, assisted by Mary Longman and Marion Phillips, B.A., D.Sc. (Econ.). The parishes dealt with included Edinburgh, Glasgow, Govan, Dundee, and a typical rural parish in Lanarkshire.

The investigator was instructed to make inquiry in the parishes mentioned, and to report in regard to the health, clothing, condition, and circumstances of children boarded out within and without the parish, and children whose parents or guardians are in receipt of outdoor relief as widows, widowers, single unmarried women, or deserted women. He was further instructed on completion of this part of his inquiry to compare the results so obtained with the results obtained by the examination of a selected number of children in receipt of relief in poorhouses, poorhouse hospitals, and institutions in which Poor Law children are maintained.

Dr. Parsons and his assistants carried out these instructions most thoroughly; their report (including appendices) extends to 236 pages.

In an introductory chapter Dr. Parsons states that the total child pauperism in these parishes was 7,400, and that 1,060 cases were personally investigated, the houses they lived in were visited, the parish records and offices were seen, and any general information which appeared to throw light upon the cases collected.

The Causes of Chargeability.

Dr. Parsons presents two tabulated statements as to the causes of pauperism which he says make it clear that in the far greater number of cases—in from 76 to 95 per cent.—pauperism is due to the death of the father, the chief breadwinner. Indeed, with the exception of 3 per cent. of the cases, all the pauperism investigated was due to illness or death. But there were certain local variations in the proportions of one class of case to another. Thus, in Glasgow there are fewer sick fathers, whether away or at home, than in any other parish. The difference is too great to be accounted for by local causes or the small number of cases. Indeed, the difference is as great between Glasgow and Govan as between Glasgow and Edinburgh, though Glasgow and Govan are contiguous and the social conditions are precisely the same. It appeared to the investigators that the difference was due to a difference in administration, and that in Glasgow it is much harder for the sick man to get relief for his children than in other parishes. There is, however, nothing to show that the invalids in Glasgow are fewer or their families richer than elsewhere.

The variations in the number of deserted wives are also noticeable for the high proportion in Edinburgh and the low rate in Dundee. This certainly reflects the sound conditions of these particular towns, for in Edinburgh the sense of marital and parental responsibility (shown, for example, by the number of fathers who died of illnesses

[1] Report to the Royal Commission on the Poor Laws and Relief of Distress on the Condition of the Children who are in Receipt of the Various Forms of Poor Law Relief in Certain Parishes in Scotland. By C. T. Parsons, M.D.Lond., assisted by Mary Longman and Marion Phillips, B.A., D.Sc. (Econ.). Printed for His Majesty's Stationery Office by Wyman and Sons, Fetter Lane, London. (Cd. 5075.) Price 2s.

due to drunkenness) seemed particularly weak, while in Dundee the woman is so often the chief wage earner as to offer the husband a very good reason for remaining with his family. In both towns the facts were not influenced by any particular Poor Law policy.

In those cases in which pauperism was due to illness or death the nature of the illnesses of the fathers were ascertained and the facts tabulated to show the duration of the illness and the class of disease to which it belonged. The former classification shows that in 59 per cent. of the cases a long illness—an important factor in all pauperism—preceded death or was still continuing. In 14 per cent. the father had been taken suddenly without warning, and in 27 per cent. had died after a short illness.

Pauperism may therefore be attributed simply to the loss of the breadwinner. In a few cases, relief to the father, or, if he was from home, to the mother, may have preceded his death, but in far the majority resort was had to the Poor Law during the year which followed it. In Glasgow, however, in thirteen cases from one to five years intervened. In two of these cases the father had been ill since the former date, but had not received relief at once. In one case, the wife had been deserted for eleven years, and had first received relief in 1901. In two cases there was compensation money; in two, some savings. In two others the widows struggled along until the payment of rates became too heavy, and, applying for release from them, was advised that she had better ask for aliment also. The families whose circumstances were investigated were, therefore, those of the working class, pauperized by illness or death and sufficiently long in receipt of relief for any effects it may have to have become marked.

Administrations of Outdoor Relief.

A comparison of the methods of giving relief in each of the four burghal parishes show that in one only, that of Glasgow, is a system adopted allowing full weight to be given to the circumstances of each case and full supervision exercised over the work of each assistant inspector. The system followed in Govan is better than that of Edinburgh, and that of Dundee better than Edinburgh, but in Dundee the control exercised by the inspector on first applications by interviewing the applicants, seemed to the investigators a very illusory one. The inspector's knowledge of cases was so very small as to suggest that the interview is a perfunctory formality. The great power which rests in the hands of the assistants is the more dangerous, as it was invariably found that in these parishes where it was greatest, their knowledge of the people was least.

The results of a careless system of administration, when compared with the efforts made in a thoroughly administered parish such as Glasgow, appeared to the investigator to consist in this: In the former children may be left in evil surroundings for an indefinite period, and may never be rescued from them until the parent or parents are brought within the scope of the criminal law. In Glasgow there are bad cases now on the roll and there are children living in unsuitable houses, but these cases are mostly under observation. It is known that they are bad, and after attempts had been made by cautions, reprimands, advice, and reduction of relief, to improve the conditions, the case against the parent will have been so carefully built up, that the parish will be able to take possession of the children and send them to good homes elsewhere. The inspector has succeeded in impressing upon the minds of the mothers that they have to fulfil their parental responsibility and that the parish council will watch to see that they do. The present staff is, however, neither large enough nor of the kind required to do all the watching necessary.

The investigators did not find that any particular benefit accrued from the parish undertaking to give a clothing dole once a year to the children on the books. In Glasgow even a thrifty mother cannot depend upon it, and, while sometimes it is given apparently as a reward for virtue, at other times it is given because a careless, neglectful mother declares that she cannot send her children to school unless she get clothes for them. In any case, it is either a charity dole or a confession that the relief already given is inadequate. A large parish could clothe the children at less cost than the individual mother. To realize this economy, however, the yearly dole should be replaced by a definite clothing allowance to be reckoned in deciding upon the amount of relief.

Outdoor medical relief is easily obtained in all the parishes investigated, but, though there were very few complaints made of the doctors, there was great reluctance to ask for their attendance, and sometimes an express desire to have women doctors instead.

Attention is called to the fact that no one of the councils has dealt on any definite principle with the question of illegitimate children. In no parish does the widow who bears one illegitimate child necessarily lose relief. Amongst the assistant inspectors it seemed to be considered an event that must occasionally be expected, and was in need of no excuse when the father of the child was a lodger. It could not be found that any parish council had ever considered that for a young inexperienced widow in the first troubled years of adapting herself to poorer circumstances than she had known during her husband's lifetime, a male lodger was a very great danger. This is considered particularly surprising in Glasgow, where the council and the inspector are, in general, both humane and thoughtful in regard to the widow's welfare. Nevertheless, the widows on the special roll, who are younger than the majority of those on the other rolls, are encouraged to add to their income by lodgers because the work need not take them away from their homes.

The amount of relief given is uniformly higher than that given in England. For the urban districts investigated the medium is 7s., and the prevailing scale is 2s. to 2s. 6d. a child. Between the different towns, however, the variations are considerable, chiefly because in Glasgow and Govan relief is proportionate to income, and in Dundee and Edinburgh the relation of income to the family's needs is much neglected. Thus in Scotland, as in England and Wales, the treatment of the widows and their children varies less with their needs than with their settlement.

The policy in Glasgow has been not to reduce the number of cases, but to keep up the standard of those who apply and are given maintenance from the rates. The parish of Glasgow does not seek to narrow the limits of its responsibilities as does, for instance, the union of Bradford, but to organize its activities in order to obtain for those who have suffered economic ruin by death or illness a condition of life not incompatible with efficient citizenship. This is the main tendency of the policy, and it is therefore important to see in what directions the administration falls short of this aim.

Criticism is directed here along two main lines. In the first place there is the conflict of principles, on the one side the desire based on sound economy to produce efficient citizens, on the other hand the Poor Law requirements of destitution or "impotence," and the value of uncertainty in income as an encouragement to thrift. Thus, relief being a legal right where destitution is proved, the council cannot lay down a simple statement of conditions of hygienic sanitation and good conduct as an invariable continuance of relief. They must, therefore, content themselves with a statement, such as they make on their leaflet on cleanliness and care of children—avoiding the imperative mood and confining themselves to expectations. But this principle also leads to the short-sighted refusal to grant relief when any sum remains over from club or insurance money—a refusal made in Glasgow although not in all other parishes. A departure from this has, indeed, been advised by the Scottish Local Goverment Board.

It is, however, in the second direction—the fitness of the inspectorate to carry out the duties of supervision necessary if the children are to be well brought up—that the failure of the administration is most patent. Roughly speaking, the needs of the children are sanitary housing, clean and properly furnished homes, well cooked and sufficient food, comfortable clothing, attention to health by means of medical inspection, and the careful carrying out of doctors' orders, and, finally, education, not only in school, but by the moral and mental training of their home life. For the duty of seeing that these needs are supplied, the parish provides as assistant inspectors a number of men chiefly between the ages of 23 and 30 who have graduated for their work by the ordinary routine of office clerks.

For such duties young men are not well fitted. The first is a duty which could only be carried out by the sanitary authority, with its trained inspectors responsible to a still more highly trained official chief. As to the second, the cleanliness and comfort of the home, the inspection of the Poor Law official is almost useless. He may be relied on to discover cases of extreme filth, but it is not enough to discover these. Nor is it enough to recognize the real condition of the children's homes. Advice, admonition, and instruction must necessarily follow. These officers are obviously unable to give such advice, and the women should be the first to recognize that fact if they attempted to do so. Of questions relating to food and clothing the same may be said. As to the children's health, the need of trained inspection is too patent to require further comment.

Finally, there are the mental and moral needs of the child. The assistant inspector cannot deal adequately with these, for he is in no way fitted by age, training, or education for such duties. Here and there an assistant inspector may be suited for such work. This suitability, however, would be a mere matter of chance, and the number of such a kind thrown up by the changes of office routine and promotion would necessarily be small.

The real stumbling-block appears to be that in whatever direction the Poor Law authority sets out, and whatever may be its intention, it is tied by the test of destitution, which was the basis of the present organization.

HOUSING CONDITIONS.

(a) *Burghal Parishes.*

All the families visited in the burghal parishes, with one exception, lived in flats in tenement houses. The flats consisted of one to four rooms, and opened by their own front door from the landings of the common stairs.

The active sanitary authority of Glasgow does much to secure that the closes and stairways should be kept clean, and requires some light and ventilation on the common stair. The worst feature of housing in Glasgow is the farmed out house and the back land. This is peculiar to Glasgow. It is a row of tenement houses entered through pend or close from the main street, but placed at the back of the houses forming the frontage. The back land is often placed too close to the first row, and is dark, ill-ventilated, and insanitary. The farmed-out houses usually consist of single tenements in houses converted from larger flats, and therefore lacking in sufficiency of sanitary arrangements and conveniences. These houses, being let for short periods, attract poorer tenants, and are usually inhabited by a low class.

The measurements made by the sanitary department of Glasgow of the houses occupied by the Poor Law cases showed some very interesting results. The Corporation have what are called "ticketing" powers over houses with a cubic space up to 2,600 ft. These powers signify that on the lintel of these houses they may place a disc giving the cubic contents and the number of adults who may be accommodated without overcrowding. An adult is any person over 10 years of age, and is equal to two children.

In dealing with the Glasgow cases, 31 houses on the special roll and 122 on the ordinary roll were measured; 18 of the houses on the special roll and 52 on the ordinary roll fell within the ticketing limit and had less than 2,600 cub. ft. of space. The medical officer stated that the impression gained in measuring the homes occupied by these people is that they are "respectable people, for the most part living in comparatively favourable surroundings." Some flats lacked through ventilation; some houses lacked sufficient space around them; in many cases the sanitary arrangements were badly placed or badly looked after, and in many the repair of the rooms and staircases were defective. On the whole, however, the housing, apart from overcrowding, was satisfactory.

In Edinburgh a low level is reached, and the crowded districts of the Old Town have an unenvied notoriety for their picturesque squalor. Even in the newer parts of the town, where the flats are not in themselves bad, the stairs and closes are kept less clean than in Glasgow.

The housing in Dundee in the cases visited was almost universally bad. The rooms are very small and ill-ventilated, the sanitary arrangements are unsatisfactory, and the repair very faulty.

(b) *Rural Parishes.*

The housing conditions of the Poor Law families in Lanark were found to be almost wholly bad. The houses are small, crowded together, and badly built and repaired, and the sanitary arrangements with one exception bad.

CONCLUSIONS.

An account of the children at work brings to an end the report on the homes of the children whose parents are in receipt of outdoor relief. The reporters conclude this portion of the report as follows: While finding that the children in Scotland compare favourably with those in England, it cannot be said that their condition is altogether satisfactory. It remains, therefore, to bring together the chief unsatisfactory conditions which we have observed which are sufficiently tangible to be expressed numerically. Putting aside the one rural parish of Lanark, where the numbers are insignificant though the conditions are bad, we found in the four burghal parishes:

1. That the number of houses which are insanitary by reason of insufficient ventilation is 15 per cent. of the whole.
2. That the number of houses which are insanitary by reason of insufficient internal ventilation is 11 per cent.
3. That the number of houses which are insanitary by reason of bad sanitary accommodation is 29 per cent.
4. That the number of houses which are insanitary by reason of a bad state of repair is 21 per cent.
5. That the number of people living in one room is 13 per cent.
6. That the number living in overcrowded conditions is 78 per cent.
7. That the number living in courts or passages is 14 per cent.
8. That the number living among the lowest kind of population is 6 per cent.
9. That the number living in dirty houses is 13 per cent.
10. That the number who have insufficient (that is, poor or very poor) furniture is 16 per cent.
11. That the number of families living on less than 20s. a week is 50 per cent.
12. That the number of children badly fed is 30 per cent.
13. That the number of bad mothers is 24 per cent.
14. That the number of mothers with poor or bad health is 48 per cent.
15. That the number of mothers away from their homes for four or more days a week is 31 per cent.; and that
16. The percentage of sons in skilled work is 26, whereas the percentage of fathers in skilled work is 48.

While these simple facts express the worst features, we have invariably found that all these families which have been brought to apply for outdoor relief are marked off from the rest of the population as unfortunates, doomed to a long struggle with poverty. Where the father has been a waster or a drunkard, the position of the family may indeed have been improved by his death. But such cases are the exception. For the majority, the loss of the father has meant economic ruin and has led to a deterioration in the comfort and material well-being of the family. Thus, not only is the condition of these people to be deplored as a fact of the present, but in their circumstances to-day there is to be seen a social retrogression.

Boarded-out Children.

The general impression formed by the reporter by going from one house to another was that the boarded-out children lived in homes of precisely the same type as the ordinary out-relief children, with the same standard of living, but in general exhibiting, in each aspect considered, a slightly higher achievement, better furniture, more space, more clothes, more food, and more pleasures.

Physical Condition of the Children Examined.

The schedule used in the examination of each child was very comprehensive, and dealt with measurements, general appearance, cleanliness, condition of different organs of the body, deformities, hours of sleep, etc.

Dr. Parsons in nearly every instance took the heights, weights, and chest girths measurements himself. The

heights were taken without boots, the weights in ordinary indoor clothes, without boots, and the chests horizontally round the naked chest, at the level of the nipples, the child being directed to stand erect with the arms by the side, and to count ten whilst the measurement was being recorded. The height and weight measurements used were tested in each instance before the examination was begun.

The average measurements of the Poor Law children examined compare very badly with those of the standard averages. At practically all stages the average weight, height, and chest girth are much below what they should be. On the other hand, the measurements in some of the groups compare rather favourably with the very low average obtained by Dr. Leslie Mackenzie and Captain Foster as the result of the measurement of children drawn from some of the poorest quarters of Glasgow. In order to show this comparison between the averages obtained by measuring these Poor Law children and the averages of the Anthropometric Committee, and of Dr. Mackenzie and Captain Foster, Dr. Parsons constructed the following table:

The numbers express the percentage of cases in which the averages obtained by Dr. Parsons for each age and sex fall below (1) the averages of the Anthropometric Committee; and (2) the averages obtained by Dr. Mackenzie and Captain Foster.

(1) *Comparison with the Anthropometric Committee's Averages.*

	Children in Poor Law Institutions	Out-relief Children in Towns.	Boarded-out Children in Towns.	Boarded-out Children in Country.	Out-relief Children in Lanark.
Percentage of age-groups in which the average weight is less than the Anthropometric Committee's average	100	94	75	94	100
Percentage of age groups in which the average height is less than the Anthropometric Committee's average	100	100	100	94	100
(2) *Comparison with Dr. Mackenzie's and Captain Foster's Averages.*					
Percentage of age-groups in which the average weight is less than Dr. Mackenzie's average		11	25	56	16
Percentage of age groups in which the average height is less than Dr. Mackenzie's average	85	5	12	75	16

These figures all point to one conclusion—that in these children we have a very low type of development. It has been pointed out that the cause of the pauperism of the children examined was the death or illness of the father in 76 to 95 per cent. of the cases. Exact particulars as to the ages of the fathers at death were not obtained, but in most cases the father's death occurred at a comparatively early age. This suggests that some of the children come from a debilitated stock—at any rate on one side. It is therefore safe to assert that this type of development is the product of two adverse influences which tend to react upon and increase the effect of each other—one the insanitary environment and insufficient food resulting from poverty, the other the heritage derived from parents whose vices or ill health have led to such poverty. The serious nature of the problem presented by these children is intensified by the fact that even when brought under the influence of good sanitary conditions and good food, as in the Smyllum Orphanage, the training-ship *Empress*, and the Poor Law institutions visited, the children do not regain the ground they have lost.

It must be remembered, however, that the worst children, mentally and physically, tend to collect in the poorhouses from the impossibility of boarding them out. Similarly, the boarded-out children have, as a rule, a worse hereditary taint than those children who are living with their parents, since, in the case of the boarded-out children, both parents are dead, or are not fit to be trusted with the care of the children. This probably explains why the outdoor relief children come out rather better than the other groups as regards the children's measurements. The percentages of the country-bred children living in Lanark must be used with caution, the numbers examined being very small. As regards nutrition, the country-bred children in Lanark were the best, and the children in Poor Law institutions and those boarded out in the country slightly better than those living with their parents in towns. The percentage of unhealthy-looking children is very high amongst the Lanark group, and is lowest in the case of children in Poor Law institutions. In this respect there is surprisingly little difference between the children boarded out in the country and those living in towns.

The amount of dental decay is very large, but it is considerably less amongst the children boarded out in the country, and the same remark applies to the amount of defective eyesight. The amount of conjunctivitis and corneal disease is highest amongst the institution children. The lack of personal cleanliness was very great, and the country children—both those boarded out and those living with their parents—were as dirty as, and sometimes dirtier than, the town children. The clothes, however, were distinctly cleaner in the case of boarded-out children. The number of dull children is very high in institutions. This is undoubtedly, in part, due to the fact that many feeble-minded children are kept in these institutions owing to the difficulty of boarding them out; but it is also due, to a certain extent, to the deadening effect of institutional life, the tendency of which is to deprive the children of initiative and of individuality.

RECOMMENDATIONS BY DR. PARSONS.

Looking back over his examination of these Poor Law children, the following are the points on which reform seemed by Dr. Parsons to be needed most:

1. The absolute necessity of a more rigid system of medical examination and observation of these children. Even in the institutions visited the children were not receiving, and the present medical and nursing staff of these institutions is insufficient to allow them to receive, the individual care and attention which children of this poor type require. In the case of the outdoor children there was practically no system of medical inspection. I cannot help thinking that every child which receives relief from the Poor Law should at the outset be medically examined, and a record kept of its condition and of its chief measurements, and that this examination should be repeated at least twice in the year to test the child's progress. This work will be done to a certain extent for the Poor Law children living out of institutions under the system of medical school inspection now coming into force, and it should be possible to arrange that a copy of the schedule filled in, in the case of each Poor Law child, should be sent to the chief medical officer of the parish. The work in the institutions should, of course, be carried out by the medical staff of the institutions, which would, in most cases, require increasing for the purpose. The system which I think would work best would be one in which the whole of the medical arrangements of the parish would be in the hands of the medical superintendent of the Poor Law infirmary or hospital. This officer should be entitled to receive any information possessed by the Public Health Department or the School Board as to the health of any of the children or adults in receipt of Poor Law relief. Similarly, it would be his duty to transmit to the Public Health Department and the School Board any information he possessed which would be of advantage to them. This officer would then be in a position to arrange the medical work of the parish to the best advantage, to decide which of the children it would be advisable to admit to the Poor Law hospital, which could be better treated at home, and which would require other special treatment. He would be able to follow the progress of each child in comparison with the general progress of the children, would be in a position to form an opinion as to which children were not flourishing as they should, and to form a tolerably correct opinion as to whether the children boarded out and those living with their parents were receiving the full advantage of the money allotted for them.

2. I formed the opinion that the boarding-out system was in most cases far better for the child than bringing it up in institutions. The poorhouse is a most undesirable

environment for a child to grow up in, and it is impossible to condemn too strongly those cases in which the child lives and attends school within the poorhouse and never mixes with children outside. Quite apart from the unnatural conditions under which the child grows up and its lack of knowledge of the world, the staffing of these institutional schools is usually so small that the child must suffer considerably in its ordinary education. Receiving homes should be provided for children whom it is not desirable for any reason to board out or who are not likely to be long chargeable. These receiving homes should be quite separate from the poorhouse, and the children in them should attend the local schools.

3. Two special results of my investigation struck me very forcibly. One was the amount of dental decay present in these children. When one remembers how much the health and nutrition of the child may be affected by the presence of badly decayed teeth, I think it is abundantly plain that the medical Poor Law service of every parish should include a dentist. The second result was the large amount of uncorrected visual defect found. Even in the institutions visited no provision seemed to be made for the detection and correction of visual defect. One-third of the children examined in the Poor Law institutions showed some visual defect ($\frac{6}{12}$ or worse), and this proportion would no doubt have been increased if the eyes had been tested separately. The serions results of this visual defect are shown by the fact, remarked upon earlier in the report, that many of these children with defective sight are distinctly duller and more stupid than similar children without such defect. Every Poor Law child's eyesight should be tested periodically as a matter of routine, and proper correcting glasses supplied if necessary.

4. I paid particular attention to those children who were employed out of school hours. On the whole I did not see any reason to believe that this employment prejudicially affected them. On the contrary, I formed the opinion that these children were often brighter and more self-reliant than the other children. In some cases, however, these children did not seem to be getting so much sleep as they should, owing to the early hour at which they started work, and the demands made by this employment upon the physical and mental capital of the younger children is likely to be felt prejudicially later on in life. It seems to me desirable that the employment in this way of children, so young as nine, ten or eleven years old, should be prohibited and certainly this ought be so in the case of boarded-out children, the foster parents of whom should not be allowed to make a profit from them in this way.

5. The question of the dietary of these children is one which appeared to me hardly to receive the attention it should, even in the institutions visited. The food supplied to the children in the poorhouses, so far as I saw it, seemed to be good and wholesome, and the quantities allowed by the diet scales to be sufficient, but the dietaries lack the variety which it is so important they should possess, and are deficient in some of the articles of diet which specially appeal to children's tastes. These badly developed and poorly nourished children require individual dietary so as to suit their special likes and dislikes, and careful supervision to ensure that a sufficiency of food is eaten. It would be easy to arrange for a much more varied diet without any addition to the cost. It is curious to observe that such a valuable article of diet as fish appears in only one of the dietaries; bacon, which is valuable as a palatable means of increasing the amount of fat consumed, does not appear in any of the dietaries; and eggs, fresh fruits, and cake are also not mentioned.

To the report is added no less that twenty-three appendices giving statistics regarding the houses in the different parishes visited, employment of children who have left school, incomes of the families in receipt of parochial relief, a table of illustrative cases showing particulars of each family and of the home surroundings, and the most important results of the medical examinations of those members of the family who were examined.

The report is a most exhaustive one, and will be of considerable help to those who are specially interested in the question of boarding-out children.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE sixty-ninth Annual Meeting of the Medico-Psychological Association of Great Britain and Ireland was held in Edinburgh on Thursday and Friday, July 21st and 22nd, under the presidency of Dr. John Macpherson, the Senior Commissioner in Lunacy for Scotland. On Wednesday, July 20th, there were meetings of the Parliamentary and Educational Committees in the Royal College of Physicians. In the evening, at 9.30, Dr. and Mrs. Macpherson gave a reception in the Hall of the Royal College of Physicians which was a select and highly enjoyable function. On Thursday morning, at eleven o'clock. the serious business of the meeting began with reading of minutes, election of officers and Council, and various other items of business. In the afternoon the President presented prizes and medals that had been awarded during the year, and then gave his presidential address. Thereafter papers were read by Dr. Ford Robertson on "Infective Foci in General Paralysis and Tabes Dorsalis"; by Dr. John Carswell on "The Treatment of Incipient Insanity in Observation Wards"; by Dr. J. P. Sturrock on "Certain Form of Insanity in the Criminal Class"; and by Dr. R. M. Marshall on "Periodic Attacks of Mental Excitement and Depression in the Chronic Insane."

In the evening the annual dinner was held at the Caledonian Station Hotel, when about 108 gentlemen were present.

On Friday morning, July 22nd, papers were read by Dr. A. R. Urquhart "On Lunacy Administration in Scotland"; by Dr. Lewis C. Bruce on "The Deviation of Complement in Connexion with the Diseases known as Mania"; three papers by Drs. Hamilton Marr, Ivy McKenzie, and Browning on "Arsenical Treatment of Protozoal Diseases"; and a paper by Dr. C. T. Ewart on "Eugenics and Degeneracy." After this, by the kindness of Dr. G. M. Robertson and the Board of Managers of the Edinburgh Royal Asylum, luncheon was served to the members of Craig House, Morningside. At the afternoon session, in the large hall at Craig House, Dr. George M. Robertson opened a discussion on "The Treatment of States of Mental Excitement in the Insane." Then followed papers by Dr. Leonard D. H. Baugh on "A Clinical Study of Anaesthesia, Mental Confusion, and Moods in Epilepsy, Confusional Insanity, and Hysteria"; by Dr. R. Dods Brown on "The Viscosity of the Blood in Mental Diseases"; by Dr. G. Rae Gibson "On the Treatment of Dementia Praecox by Increasing the Blood Tension"; by Dr. Alice Babington on "A Note on the Opsonic Index in Insane Persons"; by Dr. G. Scott Williamson on "A Further Contribution to the Study of the Cerebro-spinal Fluid"; by Dr. Winifred Muirhead on "The Wassermann Reaction in the Blood and Cerebro-spinal Fluid and the Examination of the Cerebro-spinal Fluid in General Paralysis and Other Forms of Insanity"; by Dr. H. Morton on "The Chemistry of the Cerebro-spinal Fluid"; by Dr. Gilmour on "The Wassermann Reaction and a More Reliable Technique"; and by Dr. C. G. A. Chislett on "Syphilis and Congenital Mental Deficiency."

At 5 p.m. there was to have been a garden party at the Craig House, but as the weather was unkindly, it became a reception in the large and beautiful hall of the Craig House. The guests were received by Dr. Geo. M. Robertson, and despite the adverse weather a very enjoyable afternoon was spent. On Saturday, July 23rd, there was an excursion to Bangour Village Asylum, where Dr. Keay, the Medical Superintendent, read an account of the Segregate System as exemplified by Bangour Village. After luncheon an inspection of the Village Asylum by the members took place, followed by tea at Dr. Keay's house.

UNDER the will of the late Mr. Alfred Shipley of Bristol the following medical institutions connected with the city of Bristol receive bequests of the amount stated against their names: The General Hospital, £1,500; the Royal Infirmary, £500; the Royal Hospital for Women and Children, £500; the Winsley Sanatorium, £500; the Eye Hospital, £200; the Orthopoedic Hospital, £100. A sum of £1,000 is left to the University.

THE ASSOCIATION OF BRITISH POSTAL MEDICAL OFFICERS.

THE annual dinner of this Association was held in the Whitehall Rooms, Hotel Metropole, London, on July 14th. The President, Dr. GEORGE MASON, M.A.Cantab., Marylebone, London, was in the chair. Amongst those who accepted invitations were: The Right Hon. Herbert Samuel, M.P., Postmaster-General; Sir Matthew Nathan, G.C.M.G., Secretary to the Post Office; the Right Hon. C. E. Hobhouse, M.P., Financial Secretary to the Treasury; Sir R. Morant, K.C.B., Secretary, Board of Education; the Right Hon. Eugene Wason, M.P., Sir Joseph Walton, Bart., M.P.; Sir Dyce Duckworth, Bart.; Sir Robert Burnet, Physician to His Majesty's Household; Sir Robert Hunter, C.B., the Solicitor to the Post Office; Sir Edward Troup, K.C.B., Permanent Under-Secretary, Home Office; Surgeon-General Gubbins, C.B., M.V.O., Director-General Army Medical Service; Sir Alfred Keogh, K.C.B.; Lieutenant Colonel Munkhouse Wilson, C.B., C.M.G., D.S.O.; Colonel W. Price, C.M.G.; Captain J. Mulligan, A.M.S.; Sir William Collins, M.P.; Mr. T. Wiles, M.P.; Messrs. E. W. Farnall, M. J. Ogilvie, and A. H. Norway, Assistant Secretaries to the Post Office; Mr. E. P. Redford, C.B., Secretary to the Post Office, Edinburgh; S. F. T. Swayne, Assistant Accountant, General Post Office; Messrs. W. T. Rushton, I.S.O., and J. P. Barnard, Surveyors to the Post Office; and several members of the Staff in the Secretary's Office at St. Martin's-le-Grand, and many Postmasters. Dr. John Matheson (London) the President-elect.

The following vice-presidents and members of the association were also present: Drs. L. Adeney, J.P., Tunbridge Wells; Walton Browne, LL.D., Belfast; R. Paramore, London; W. Hallowes, Newark-on-Trent; A. Roberts, Reading; C. Moore, Leicester; R. Emmett, Portsmouth; W. Malcolm, London; P. Jackson, London; H. Hall, Hertford; T. Angior, Wigan; H. Brabant, London; K. Lund, London; E. Greenwood, London; A. Campbell, J.P., Dundee; W. Berridge, Redhill; J. Walters, Reigate; E. Mapleton, Goudhurst; C. Graham Grant, London; Coode-Adams, London; G. Hovenden, London; Thoresby-Jones, London; W. Morris, Cardiff; R. Giddings, Nottingham, Honorary General Secretary, and many others.

After dinner, the loyal toasts having been drunk, Sir JOSEPH WALTON, Bart., M.P., proposed "Our Imperial Forces." Surgeon-General GUBBINS, C.B., responded.

Sir DYCE DUCKWORTH gave "The Houses of Parliament," and Sir WILLIAM COLLINS, M.P., replied. The health of the Postmaster-General was proposed by the CHAIRMAN in happy and well-chosen terms, and it was drunk with musical honours in the most hearty manner. Mr. SAMUEL, in replying, after having expressed his appreciation of the opportunity these annual gatherings of the officially recognized associations afforded him of meeting the various sections of his staff, observed that there was no branch of the department which had expanded more remarkably within the last few years than that of his medical officers. Only some five years ago they numbered between five and six hundred, whereas to-day they totalled nearly three thousand medical officers, and he thought, therefore, that the medical profession ought to be very grateful to the Post Office. He referred to his recent official connexion with the Home Office, and to the part he had played in having telegraphist's cramp scheduled as one of the diseases of occupation under the Workmen's Compensation Act. He voiced his profound regret that there should be any possibility of "diseases of occupation" under our modern social system, and stated that he had appointed a Departmental Committee to fully investigate the subject of telegraphist's cramp, not with a view to the question of how they could compensate those becoming afflicted with it, but with a view to securing, if possible, its total prevention. He further referred to the departmental inquiry which was being held into the alleged excessive illness amongst operators in telephone exchanges, and stated that he would be glad to receive from that association as early as possible any information or suggestions on either of these subjects, if, perchance, its members held any ideas regarding them which they would like to bring under notice. He mentioned the prevalence of tuberculosis amongst the Post Office staff, and, touching upon the sanatorium treatment, observed that in a few weeks' time he was looking forward to being present to open the new pavilion at the Benenden Sanatorium, which has been erected for the exclusive use of postal employees. He considered that every postal official should contribute towards its maintenance; that at present only a small proportion did so; and that each postal medical officer in his individual sphere could do much to influence the staff in this direction, and he earnestly hoped that they would never lose an opportunity of doing so.

Subsequently Mr. WASON, in proposing "The Association of British Postal Medical Officers," remarked upon the strongly representative character of the association, how it extended from the Shetlands to the Channel Islands and from east to the extreme west of the United Kingdom. They had heard from the Postmaster-General of the large increase in the number of postal medical officers throughout the country within the last few years, still he knew that this association comprised in its membership the postal medical officers of all the principal London postal establishments outside the head office staff. The medical officers in all the large provincial cities and industrious centres and in very many of the smaller towns and also many of the recently created country subdistricts whereby the postal employees of the villages are grouped together in the country under one of the practitioners of the district. It was there he understood the bulk of the non-members were to be found, and he hoped that as time went on they would be induced to join the association also. He expressed the great pleasure it always gave him to attend these dinners which he had done for many years under many Presidents, but under none more delightfully genial than their present one, Dr. George Mason. The connexion between the legislative and the medical profession was, in his opinion, a far-reaching one, and it was of the utmost importance that a cordial relationship should exist between them. He knew no medical association that extended such generous hospitality to the Legislature and its men of distinction in science and affairs as did that association, and he considered it was highly satisfactory to the Legislature and very advantageous to the profession, whence the association had its being. Year after year he had been present, and had always met many distinguished members of the Legislature and many distinguished permanent public officials. He wished every success to the association, and that it might long continue on its present lines.

Dr. JOHN MATHESON, the President-elect, briefly replied.

Sir EDWARD TROUP, K.C.B., Permanent Under Secretary, Home Office, in proposing "His Majesty's Post Office," referred to the blank created by Mr. Samuel's withdrawal from the Home Office, and how much the Post Office had gained by being brought under his rule. Mr. Samuel had reminded them how grateful the medical profession ought to be to the Post Office for the large number of its members that were employed by it, but he thought he could justly claim an equal share of gratitude for the Home Office, because they availed themselves of the services of an enormous number of medical men as certifying factory surgeons, prison surgeons, etc.

Sir MATTHEW NATHAN having ably replied, "Our Guests" was gracefully toasted by Dr. WALTON BROWNE, LL.D., and happily responded to by Mr. A. H. NORWAY.

A most enjoyable programme was then closed by Sir MATTHEW NATHAN, in the most genial tones, voluntarily asking the company to drink the health of their Chairman.

The pleasures of the evening were greatly enhanced by an exceptionally fine selection of songs and music, which were interspersed with the toasts, and which had been arranged through the kindness of Dr. Graham Grant, London.

THE Keith gold medal of the Royal Society of Edinburgh has been awarded to Dr. Wheelton Hind, Consulting Medical Officer of the Union Infirmary, Stoke-on-Trent, and Surgeon to the North Stafford Infirmary and Eye Institute. His paper dealt with the Lamellibranch and Gasteropod fauna found in the Millstone Grit of Scotland. The Keith prize was founded in honour of John Napier, the inventor of logarithms, and is awarded biennially. Only on two previous occasions has it been awarded to anyone other than a mathematician or a physicist.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Home Office Vote.—Last week, when the vote for the Home Office came on in Committee of Supply, a very interesting discussion was opened by Sir Charles Dilke, who made a general criticism of the work of the department. He first complained of the need of more women inspectors, and pointed out that there had been some cessation of advance in this respect. While the work had enormously increased the strength had been one inspector below the limit, and for half a year there had been 16 instead of 17. After discussing the working of the Truck Acts, he said progress had been made as regards industrial diseases, except in the case of lead poisoning. Phosphorus necrosis had been lessened, but there had been an outbreak of one of the old cases, which made for a suspicion that all was not yet quite well. As regards lead in the tinning processes, there was a falling off in the figures last year—a matter for congratulation—but there had been a total increase again this year, and it was a very notable fact that while Dr. Whitelegge explained the falling off of cases by the fact of the official inquiry, Dr. Legge pointed out that it was too notable a fall to be due to scientific measures and improved ventilation. In the Potteries, in regard to china and earthenware, the cases had increased this year to 41 as against 24 in the six months of last year, and the deaths had also increased. These figures caused some doubt as to the working of the certifying surgeon and medical referee system. In these cases of industrial poisoning one wanted some appeal to a competent scientific or medical authority. He regarded with disfavour the policy of giving up the prohibition of the use of dangerous materials for ventilation, which he believed was ineffective. As regards the system of certifying surgeons and medical referees, he called attention to the fees, which were different in Ireland to what they were in England. They were five times as high in case of an action for compensation as in the same action taken under the dangerous trades provisions, so that a man had to pay in one case 5s. for a certificate which he could get for 1s. in the other case. He also referred to the abuses of young female labour in some districts, and the neglect to carry out the proper rest period in childbirth cases. Mr. Hills, who seconded Sir C. Dilke's amendment to reduce the vote, pointed out that the lead poisoning cases were about 400 in 1896, in 1900 they had fallen to 100, since 1901 the figures had been stationary, but they showed a substantial increase this year. The death-rate was about 1 in 1,000. Lord Henry Bentinck called attention to the excessive weights carried by young persons in some trades, and Mr. Gill spoke strongly of the evils caused by dust in cotton mills. In one instance of 130 men, whose average age was 45, only 32 were sound, and in another case of 136 men examined 78 per cent. suffered from lung trouble. Mr. Masterman, in his reply, said that in three years they had increased the number of lady inspectors from ten to eighteen, and he thought no definite promise had been made to go beyond that number. Still he admitted there ought to be more lady inspectors. With regard to lead poisoning, he rejoiced at the improvement shown in last year's report, showing the diminution in the Pottery district by nearly one-half, and he regretted deeply the bad return for the first six months of this year. The fact was that the trade had been more active, and this was reflected in the increase in the number of cases of lead poisoning. He did not agree with Sir Charles Dilke in his criticisms of the report of the Departmental Committee, and he thought it would be fatal to start another committee or initiate a rival policy at present. As regards the use of phosphorus, the use of yellow phosphorus had been stamped out under an International Convention, but they had no such convention as regards lead; if they had, the position would soon change. If within a reasonable time it became evident that they could not get rid of lead poisoning by special rules and self-inspection, he thought notice should be given to the masters that other action would be taken. In reference to certifying surgeons, he agreed that the position was not satisfactory, and action would probably be taken. Sooner or later a committee would have to be appointed to consider the working of the Compensation Act, and the question of certifying surgeons and medical referees would have to be included. As to the divergence of fees: The fee of 1s. was supplemented under the Factory Act of 1901 by an additional amount given by the Home Office, but the fee of 5s. under the Workmen's Compensation Act for a complete examination could not be supplemented. He did not feel much inclined to deplore the small fee paid for a thorough examination. What should be pressed for was not a reduction of the fee of 5s., but the power to supplement in one case as the other the fee paid to the doctor. As regards infantile mortality, they had called for special reports from medical officers of health. These reports were now being considered, and would, he hoped, lead to some definite guidance. He defended the action of the Home Office as regards the work of florists, and assured the member for Bolton that the dust in the carding rooms of cotton factories was admitted to be a serious problem, and no time would be lost in adopting better methods of prevention. Several other members raised other questions, and among them Sir William Collins called attention to the action of the Home Office as regards the Asylum Officers' Superannuation Act passed last year. It was the duty, under Clause 1, of the Visiting Committee to classify the established officers into two classes for the purposes of pensions. He complained that a circular issued from the Home Office prejudiced the position of certain officers, and he contended that the Act never meant the Home Office to advise on the question of classification. Mr. Masterman assured the Committee that the Home Office had consistently taken up the position that it had no jurisdiction in this matter, and if a circular such as that described had been sent out it was a misleading one. Sir Charles Dilke then withdrew his amendment, and the Committee went on to discuss the expenditure on prisons.

Provision of Meals for School Children.—Mr. James Parker introduced last week a bill to amend the Education (Provision of Meals) Act, 1906, by making it legal for local authorities to provide meals for children attending elementary schools during the period of vacation as well as during the time of attendance at school. Several local authorities in the constituency represented by Mr. Parker had been surcharged for doing so by the district auditor, and he wanted to prevent this in future, as he argued it was necessary to feed necessitous or ill-fed children during the holiday time in order to maintain their health and prevent physical degeneracy. Mr. Ashley criticized the proposal, but the bill was brought in and read a first time It is backed by Mr. Parker, Mr. Barnes, Mr. Clynes, Mr. George Roberts, Mr. Chas. Duncan, Mr. Tyson Wilson, Mr. Shackleton, and Mr. William Thorne.

Vivisection Experiments.—Mr. Greenwood asked the Secretary of State for the Home Department whether his attention had been called to an account of certain operations of oöphorectomy performed by Mr. S. G. Shattock upon two rabbits on October 12th and November 5th, 1908, respectively, and published in the Proceedings of the Royal Society of Medicine, vol. iii, No. 2, issued in December last, after which operations the animals were allowed to recover from the effects of the anaesthetic administered, and were kept alive for observation, as part of the experiments, until April 10th and October 11th, 1909, respectively; and whether Mr. Shattock held a certificate authorizing these experiments at the time when he performed them. The Under Secretary said that Mr. Greenwood

was no doubt aware that Mr. Shattock was the licensee referred to in the Home Secretary's reply of July 5th. The facts were as stated in the question, and the renewal of the licence was refused in consequence. The Home Secretary regretted that, after what he had said in his previous reply, the hon. member should have thought it necessary to bring forward the name of the licensee.

Malta Fever and its Cause.—There was quite a discussion on this subject recently by way of question and answer begun by Mr. Chancellor, who asked the Under Secretary of State for the Colonies if he would instruct the new Commission appointed for the purpose of investigating the origin of Mediterranean fever to reconsider the question from a sanitary and statistical standpoint in relation to the military, naval, and civil populations, respectively, especial regard being paid to the sudden decline of the disease in the army six months prior to the prohibition of goat's milk, the gradual decline in the navy since the dredging operations in the Grand Harbour were commenced and the stoppage of sewage deposit therein, the uniformly lower rate of attack among the civil population compared with the military and naval populations, and the greatly decreased incidence among the civil population in those portions of the island of Malta where extensive sanitary improvements had been recently effected; would he see his way to appoint upon that Commission at least one medical gentleman from this country holding broad sanitary views who might assist the Commission in determining factors other than those of a bacteriological nature; and would he be prepared to add the name of Dr. P. P. Agius, B.A., M.D., Ph.D., of Malta, in view of his scientific attainments, to those of the members of the Commission. Colonel Seely replied that it was not proposed that the new Commission should concern itself with any other question than the manner in which goats became infected, which was the only matter in connexion with the causation of Malta fever which remained obscure. The elected members of the Council of Government were only prepared to concur in the appointment of the committee on the condition that this question was made the special object of their inquiry. The Secretary of State had agreed to the proposal of the elected members that they should be allowed to nominate an independent local practitioner to be a member of the Commission. It was not yet known whom they would choose. Mr. Chancellor asked whether the inquiry would consist of experiments on animals for the purpose of curing a disease from which they did not suffer. Colonel Seely answered that that rather prejudged the question. Of course, the inquiry would not be confined to experiments on animals. The question was how far and how they became affected, and that was a very proper subject of inquiry. Sir J. Randles then suggested that insanitary conditions had much to do with the prevalence of this fever; and Colonel Seely said it was rather difficult to discuss this highly technical matter by means of question and answer. Of course, every sanitary improvement tended to reduce disease. Speaking for himself, having inquired into the matter as much as he could, he thought there was no doubt whatever that goat's milk was the principle cause. Mr. Greenwood then asked if a perfectly adequate case had not been made out against any connexion between goat's milk and Malta fever, and Colonel Seely said that was a matter of opinion. He thought—and he could only speak for himself—that the reply he gave some days ago (see BRITISH MEDICAL JOURNAL of June 18th), showing the enormous reduction in Malta fever since measures had been taken on the assumption that it was caused by goat's milk, was a conclusive proof. Lord C. Beresford asked was it not the case that after goat's milk was entirely stopped in the Naval Hospital, the entries for fever were reduced from 30 to 1 per month, and eventually to none. Colonel Seely said he could not charge his memory with the precise facts, but what the noble lord said represented more or less the facts. The figures with regard to the army were even more startling.

Tuberculosis (Medical Research Work).—Mr. Lynch asked the President of the Board of Education whether, in making grants to medical schools this year, he would pay special attention to that branch of medical research which was directed to combating tuberculosis; and whether, in view of the far-reaching importance of the original research which had been carried out at St. Mary's Hospital bacteriological department, he would remove the financial embarrassment which threatened to impede the development of that work. The President replied that the Board's grants to such institutions as medical schools were made in respect of organized courses of instruction and not in respect of particular subjects or departments.

Scientific Research.—Mr. Lynch asked the Prime Minister whether, in view of the extension of higher education in neighbouring countries of recent years, and also in view of the vastness of the industrial results which have had their origin in scientific research, he would consider what means could be taken to give a stimulus to scientific research in this country; and whether, in particular, he would raise the office of the President of the Board of Education to the level of importance of that of any other great Department of State. The Prime Minister answered that the Government always had in view the objects advocated by the hon. member. He did not see how they would be promoted by the suggestion made in the second part of his question.

Cottage Nursing.—In reply to Mr. E. Jardine, who asked that an order should be issued empowering boards of guardians to contribute towards the cost of cottage nursing, Mr. Burns stated last week that boards of guardians were already empowered under Section 10 of the Poor Law Act, 1879, with the consent of the Local Government Board, to subscribe towards associations for providing nurses, and the Board had sanctioned many subscriptions under this enactment. In the recent circular on outdoor relief he drew attention to the importance to guardians of being in a position to supply nurses in case of need, and expressed the opinion that nurses were generally best provided through the agency of local nursing associations. At the same time, he intimated willingness to continue to sanction subscriptions for this purpose.

Small-Pox Epidemic (Bombay).—Sir Maurice Levy asked the Under Secretary of State for India whether an epidemic of small-pox had recently occurred in Bombay; whether records were kept as to the vaccinal condition of the cases in hospitals; and, if so, whether the Government had any information as to the causes of the severity of the outbreak. Mr. Montagu answered that small pox in an epidemic form was prevalent in Bombay City from the middle of February last to the middle of May. The Secretary of State understood that the practice in Indian hospitals was to keep a record of the vaccinal condition of every patient suffering from small-pox, but he had no information as to the data thus obtained in the recent epidemic in Bombay or as to the light thereby thrown on the causes of the outbreak. According to statements in the Bombay newspapers, the severity of the epidemic was largely due to cases imported by pilgrim ships returning from Jeddah and other ports in the Red Sea.

Mental Diseases (International Committee).—Sir William Collins asked the Secretary of State for Foreign Affairs whether it was proposed again to send official representatives from Great Britain to the meeting of the International Committee on the Causes and Prophylaxis of Mental Diseases to be held this year, at Berlin, in October; and whether the Italian

Government, with whom the formation of the Committee originated, had approached His Majesty's Government in the matter or had propounded any scheme for the future working of the International Committee. Sir E. Grey replied that the answer to the second part of the question was in the negative, and the question of the participation of His Majesty's Government in the meetings of the Committee had, therefore, not yet been considered.

Children Boarded Out (Deaths).—Mr. Staveley Hill asked the President of the Local Government Board whether, in the case of the deaths of children boarded out under the provisions of the Within Union Orders of May, 1899, and December 31st, 1909, and the Beyond Union Order of 1905, the funeral expenses of such children fell on the foster-parents or should be discharged by the guardians. Mr. Burns replied that the prescribed form of agreement between boards of guardians and boarding-out committees contained an undertaking on the part of the guardians to pay the funeral expenses in the case of the death of a child who was boarded out.

Sanatoriums for Consumptives.—Mr. Edmund Harvey asked the President of the Local Government Board whether he was prepared favourably to consider a scheme for making use of some of the vacant hospital accommodation under the control of the Metropolitan Asylums Board for the provision of sanatoriums for consumptives, if the Metropolitan Asylums Board would submit such a scheme. Mr. Burns replied that the whole question of utilizing the spare accommodation in the institutions under the control of the managers of the Metropolitan Asylums District was under consideration. He might say, however, that the question of using such accommodation for consumptive patients was one involving special difficulties.

rants to Scottish Universities.—Last week, in answer to Mr. Duncan Millar, the Chancellor of the Exchequer said that he was not prepared to propose any additional grants to the Scottish universities during the current financial year beyond the sum of £21,000 included in the supplementary estimate issued on the 13th instant; but as regards the future he had expressed willingness to sanction, subject to certain conditions, a further addition to the existing grants provided that suitable schemes of expenditure could be submitted by the authorities of the several institutions concerned. For the current financial year the total grants in aid to Scottish universities and their allocation would be:

	Grant under Universities (Scotland) Act, 1889.	Grant under Education and Local Taxation Account (Scotland) Act, 1892 †	Grant from Votes, Class IV, Subhead I.	Supplementary Estimate.	Total.
	£	£	£	£	£
St. Andrews	6,300	4,500	—	4,000*	14 800
Dundee University College	—	—	1,000	—	1,000
Glasgow	12,180	8,700	—	6,250	27,130
Aberdeen	8,400	6,000	—	4,500	18,900
Edinburgh	15,120	10 800	—	6,250	32,170
	42,000	30,000	1,000	21,000	94,000

* Includes £1,000 for Dundee University College.
† Payable from the Local Taxation (Scotland) Account.

Payment would be made before March 31st next, but the date would depend upon the receipt of schemes from the universities for the expenditure of the additional sums allocated to them.

Anthrax (Disinfection of Ships).—On Monday Sir E. Strachey informed Mr. Orde Powlett that the question of the disinfection of ships and trucks used for the purpose of conveying hides and bones to this country, and subsequently used for the conveyance of feeding stuffs, was engaging the attention of the Board of Agriculture. A notice on the subject was issued to shipowners in 1908, of which many thousands of copies had since been distributed. The Board were considering the advisability of making further representations on the subject to those concerned.

Motor Spirit Duty and the Medical Profession.—The Chancellor of the Exchequer stated on Monday, in reply to Mr. Courthope, that the Commissioner of Customs and Excise would be prepared, for the present, to consider claims for repayment of petrol duty in the case of medical men owning motors for professional purposes.

Naval Sick Berth Staff.—Lord Charles Beresford asked the First Lord of the Admiralty if there was a serious shortage of numbers in the sick berth staff of the Royal Navy; whether the mobilization of the Fleet for the manœuvres had thrown a heavy stress upon the organization, owing to the nursing staffs in naval hospitals being seriously undermanned; how many men were enrolled in the Royal Naval Sick Berth Reserve; whether any of these Reserve men had ever been to sea; and whether he could see his way to forming a Reserve of men who had served in the Royal Navy as sick berth stewards and left on completion of their first period or on taking their pensions. Mr. McKenna said that the reply to the first part of the question was in the negative. The numbers voted were being worked to without difficulty. With regard to the second part, he was not aware of any particular stress beyond what must ordinarily occur when ships were completed for manœuvres. The reply to the third part was 731 by latest returns. As to the fourth part of the question, the Royal Naval Auxiliary Sick Berth Reserve was composed of men of the St. John Ambulance Brigade. Two hundred and seventy-four men had been through a "man-of-war" course of seven days on board a ship, 155 through a seven-days' course at a naval hospital. It was not considered necessary to incur the expense involved in the proposal made in the last part of the question.

Medical Degrees and Diplomas.—Mr. Lynch asked the Secretary of State for the Home Department whether his attention had been called to the disparity in the value of medical degrees and diplomas which entitled their possessors to practise medicine in this country; and whether he would take steps, by legislation or otherwise, towards establishing a fair standard of examination qualifying for medical practice. Mr. Churchill replied that it was the statutory duty of the General Council of Medical Education to inspect and report on all qualifying examinations, and if it appeared to them that the standard of proficiency required at the qualifying examinations held by any of the licensing bodies was insufficient, to make a representation to that effect to the Privy Council, who were empowered, if they thought fit, after due inquiry, to order the withdrawal from medical authorities of the right to hold qualifying examinations.

Death at Brompton Hospital (Mrs. Keane).—Mr. Pointer asked the Secretary of State for the Home Department if his attention had been called to the circumstances attending the death of Mrs. Keane in the Brompton Hospital, London, on June 26th last, whereby knowledge of her death was kept from her husband for twenty-eight hours; if he was aware that a necropsy was performed without the husband's knowledge and consent; and whether he would order a public inquiry. Mr. Churchill replied that his attention had been drawn to this case, and he had made inquiry of the hospital authorities. They informed him that Mrs. Keane died early on the morning of

June 26th, and a telegram was sent to her husband at Mexborough the same morning; but, the day being Sunday, it was not delivered to him till early on Monday. They had already written to him expressing extreme regret that a *post-mortem* examination was held under the mistaken belief that he had given his consent, it being their rule not to make such examinations without the consent of the relatives. He did not think that any further action was called for.

The Midwives (No. 2) Bill.—On Tuesday there was quite an animated debate in the Lords when the Committee stage of this bill was taken. On Clause 2 (Constitution of Central Board) Lord Ampthill moved to amend Subsection C by giving the Institute of Midwives and the Royal British Nurses' Association power to elect as representatives other persons than midwives as laid down in the bill. He regarded the option to appoint a medical practitioner instead of a midwife as of the greatest advantage to those bodies. The amendment was accepted as regards the Midwives' Institute, but it was opposed as regards the British Nurses' Association: but on a division 32 voted for the amendment, and only 26 against it. On Clause 13, which gives power to contribute to the training of midwives, Lord Ampthill sought to add power to make grants to aid in the maintenance of midwives. This was opposed by Lord Beauchamp, and negatived without a division. On Clause 17 there was a spirited debate, as Lord Ampthill proposed to substitute the local supervising authority of the county or county borough for the board of guardians. He wished in the interests of the poor to separate the administration of the Act from all connexion with the Poor Law. Lord Sheffield sharply criticized this attack on the Poor Law, and described it as socialistic and expensive. He approved of the deterrent effect of the provisions of the bill, and objected to the amendment as a breach of privilege, inasmuch as it shifted the burden of expense from one authority to another. Lord Lytton supported the amendment, which was opposed by Lord Beauchamp and Lord Donoughmore, and finally negatived without a division. The bill then passed though the Committee stage, and was ordered to be reported.

Invalidity Insurance.—On Monday Sir Henry Kimber asked the Chancellor of the Exchequer whether the proposals of the Government for invalidity insurance included any provision for obtaining necessary medical attendance during invalidity; whether any recognized body representative of the medical profession had been consulted as to the proposals of the Government, and whether he would be prepared before formulating the Government's proposals for invalidity insurance to receive a deputation or representations from such a body upon the subject. The Chancellor replied: I have already stated that I do not think that it is desirable at this juncture to lay before the House further particulars with reference to the Government's proposal; but I can assure the hon. baronet that ample opportunity will be given to interested parties to state their views before the proposals are laid before the House.

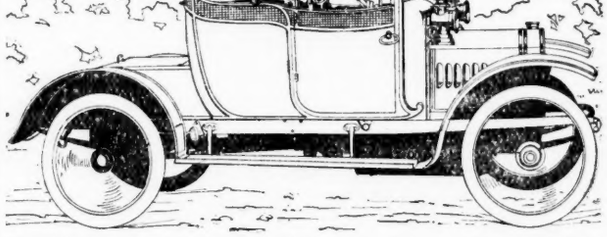
House of Commons (Ventilation of Members' Rooms).—Mr. Power asked the First Commissioner of Works whether he would take steps to provide a better system of ventilating the reading room and tea room than the one prevailing at present, which, by the rush of wind through the perforations, caused much inconvenience to members. Mr. Harcourt replied that he had been trying experiments on members—with a view to their greater comfort. He had lately reduced what the hon. member called the rush of wind, and was waiting to see if he appreciated the decrease of ventilation.

LITERARY NOTES.

THE opening pages of the June number of *L'Hygiène* should be of especial interest to its English readers. In his article on "*L'Hygiène et la Vie*," Dr. Maurice de Fleury pays a very sincere and graceful compliment to the English system of public health administration and the prompt and efficacious methods of the public health officials to prevent the spread of infection. Dr. Fleury speaks from experience, for he has been in England and has seen the public health officer at work. Three years ago, he tells us, he witnessed the prevention of an outbreak of scarlet fever in an English seaside town by the prompt removal and isolation of the first case; and he is full of admiration for the calmness and promptitude with which the whole business was carried out, from the arrival of the medical officer of health within an hour of the diagnosis to the lines upon which the local fever hospital was run. Dr. de Fleury seems inclined to look upon such methods as characteristically English and therefore somewhat difficult to introduce into France, where the complete isolation from family and friends would be repugnant to the majority of his countrymen. This cordial and unstinted praise, so generously accorded, should be doubly gratifying to the English reader when it comes from one as well qualified to pronounce judgement as Dr. de Fleury. It is a real pleasure to find the name of Georges Vicaire included in this month's list of contributors. M. Vicaire has taken as his hero Grimod de la Reynière; and, needless to say, he has sketched the life of that famous epicure with all his usual charm. Other contributors include Dr. Carron de la Carrière, who has written on "La Médication Hydrominérale et les Eaux Minérales Françaises"; M. Paul Strauss, who discusses the hygiene of infant life; H. Valleé, Dr. J. Chompret, and Dr. Marcel Labbé, whose short dissertation on aesthetic cure of obesity should be of interest to many who now vainly echo the wish uttered by Hamlet. There is also an interesting account of the career of Robert Koch, whose portrait forms the frontispiece of the number.

MOTOR CARS FOR MEDICAL MEN.

THE De Dion Company have introduced a type of body which is in certain respects novel and may be of interest to our readers. It is a great comfort in bad weather to have full protection, whilst at the same time in fine weather an open car is much to be preferred. Although there are many forms of body upon the market which meet these requirements, they are open to the objection that they are heavy, and every motorist of experience is aware that added weight means additional cost in the heaviest item of expenditure—namely, the wear of tyres; consequently, many content themselves with the incomplete protection afforded by a hood and wind screen. The De Dion Company have devised a two-seated body which is but little heavier than an open tonneau with hood, but which when closed affords complete enclosure of the driving seat and that beside it, whilst it opens out fully. This was effected by having a special form of hood and high side doors and windows, which latter, instead



of sliding down into the interior of the door, as in an ordinary carriage, are when not wanted completely removed and placed in a box constructed for the purpose. The change from the open car to the closed, or vice versa, may perhaps take a trifle longer than with the usual type, but the gain in lightness enables the new form to be used on cars of low power, to which the ordinary heavy landaulette body is hardly appropriate. Whilst speaking of De Dion cars it may be mentioned that the Marquis De Dion has for some time been experimenting with the sliding sleeve type of valves (such as the "silent Knight" type), but so far does not consider them to have such advantages as would lead him to adopt them. At present only the Daimler and certain types of Minerva cars have adopted them as a standard form.

British Medical Journal.

SATURDAY, JULY 30TH, 1910.

THE PRESIDENT'S ADDRESS.

IN Mr. Butlin the Association is fortunate in having a President of quite exceptional fitness for the post. Not only is he a man whose professional distinction adds dignity to the high office to which he has been elected, but he is one who brings to the councils of the important body over which he presides a judicial temper of mind and a statesmanlike breadth of view in practical affairs that must be of the greatest value at the present critical time in the history of its development. He has in various capacities taken a very active part in the work of the Association; in particular, he discharged the responsible duties of Treasurer with such conspicuous success that he was re-elected to a second term of office. When not on the active list of the officers of the Association he has been a close and sympathetic onlooker, and proverbially onlookers see more of the game than those in the thick of the contest. No man has a more intimate knowledge of the machinery of the Association, or a larger experience of its working. No man has taken a keener interest in its efficiency and prosperity, or shown a greater zeal in furthering the objects for which it was founded. In every sphere of its manifold activities Mr. Butlin's influence has been felt, and that influence has always been used in the most unselfish spirit for the increase of the usefulness of the Association and for the promotion of reforms required to give the profession as a whole the place of power and dignity it should have in the State, and to help the individual practitioner in his struggles against official tyranny and private injustice. In honouring Mr. Butlin the Association has honoured itself, and has recognized the great services which he has rendered to it and to the profession.

Mr. Butlin's Presidential Address, which is printed at p. 241, has a peculiar interest, for it is a general review of the history of the Association, which is especially appropriate as coming from a man who can say of many of the phases in that history within the last thirty years, *Quarum pars magna fui*. His story of what the Association has accomplished for the medical profession is made all the more impressive by its moderation and impartiality. The story is told with simplicity and directness, and in places with an unconventional frankness which clothes the dry bones of the narrative with flesh. We might well leave it to speak for itself, but we may be allowed to call special attention to a few points, for the story is an old one, and probably almost unknown to most of our readers. The poet truly says that the good men do "is oft interrèd with their bones." It is well, therefore, to be reminded of the past, if only that justice may be done to the memory of the men who built up the Association in the face of great difficulties, and who raised it to the position of a power which statesmen who undertook to handle medical matters had to reckon with, and which made possible the larger developments of usefulness that have followed and are still to come.

Dealing with the scientific work of the annual meetings, Mr. Butlin recalls addresses which mark epochs in the advance of surgery. He illuminates these allusions with pen sketches of the orators which add piquancy to his narrative. He quotes the memorable pronouncement of Lister at the Plymouth meeting in 1871, in which the great surgeon, then comparatively unknown, said that "however much the means of carrying out the antiseptic principles may come to vary from those we now use, the principle itself will certainly be ultimately recognized as the most important of all those that guide the practice." We commend this utterance to the attention of those who persistently seek to rob Lord Lister of the credit due to him for the unexampled advance in surgery with which his name is associated by laying stress on the changes in detail which he himself so clearly foresaw some forty years ago. The gradual acceptance of the Listerian principle is briefly alluded to, and reference, in which the note of personal affection can be detected, is also made to Sir James Paget's address on pathology at Cambridge, where he spoke in a most suggestive manner of the consequences of injury and disease in the structures of plants.

Passing to that part of the work of the Association which consists in the promotion of reforms intended for the benefit of the public and the profession, Mr. Butlin points out that from the very first this object was steadily kept in view. In the first half-dozen years of its existence the Association had appointed committees to consider vaccination, the condition of parochial registers, Poor Law medical relief, the medical relief of persons who are poor but not paupers, the suppression of quackery, and other matters. The subjects cover a wide field of activity directed towards the furtherance of the welfare of the public and the interests of the medical profession. Although the Association was then a small and obscure body, such was its zeal and energy that it was able to influence legislation. One instance of its successful efforts is to be found in the passage of the Vaccination Act in 1840. Very soon after its foundation the Association appointed a committee to consider the question of Poor Law medical relief. It is interesting to note how similar were the conditions with which the Association was confronted in 1835 to those against which it is struggling in 1910. The committee called attention to the "vast amount of gratuitous medical assistance that has at all times been afforded to the needy by all grades of the profession throughout the country," and pointed out that this had been productive at least of one very injurious effect: "It has induced the unthinking portion of the public to conclude that there is some sort of conventional, if not legal, obligation on the medical profession to attend without reward to the ailments of the poor." That this notion still prevails not only among the unthinking portion of the public, but among persons who should know better, may be gathered from reports of inquests, letters from correspondents and editorial comments which appear at frequent intervals in the public press and in the columns of the JOURNAL. Indeed, the doctor is generally looked upon as one whose gratuitous services may be claimed as a matter of right on behalf of any sick person in whom one or other of the individuals or bodies whose notion of philanthropy

is that somebody else should do something for the relief of distress may happen to be interested. The abuses of medical relief are still with us in as acute a form as they were with our forerunners seventy-five years ago. The Association has, from time to time, endeavoured to get these abuses remedied, with some amount of success. Now, as Mr. Butlin says, the new organization of the Association has given it a more effective equipment for the achievement of these objects and for carrying on more strenuously and with greater hope of success the struggle for the redress of the grievances from which the profession has so long suffered.

Perhaps the most interesting part of the Presidential Address is the recital of the long struggle for medical reform in which the Association took a leading part. But for it, indeed, it is too probable that the movement would have come to nothing. At the annual meeting in 1837 the Association appointed a committee "to watch over the interests of the profession at large." That somewhat nebulous instruction soon took definite shape in a series of organized efforts to bring pressure to bear on the Government to reduce the anarchy that had previously prevailed in the profession into order by establishing a uniform standard of qualification and a register that should give a medical practitioner the stamp of legal recognition. These proposals were, as is usual, made the battledore and shuttlecock of political parties. In 1851, weary with hope deferred, the Association took the course of drafting a bill of its own. But it was not till 1858 that the Medical Act was placed on the Statute Book. By this measure the General Medical Council was established, and the influence of the Association in securing this reform was acknowledged by the appointment of Sir Charles Hastings, the founder of the Association, as a member of the Council. This was, however, only a first step, and many years of struggle were required before the further advance was made. In 1886, again owing mainly to the persevering efforts of the Association, a new Act was passed which contained the very important provision that the profession should be directly represented on the General Medical Council, and making the conditions entitling a man to admission to the *Medical Register* more stringent than they had previously been. Thus, after nearly half a century of strenuous work for reform, the Association had gained a hard won victory, of which, we think all will agree with the President, it had every reason to be proud. We can only refer in the briefest way to the energy and perseverance with which the Association laboured for the redress of the just grievances of the officers of the Naval and Military Medical Services.

Much as has been effected, however, far more remains to be done. To carry to its full completion the work which has been done by those who have gone before us is the task the Association has now, with far better machinery, undertaken. The confidence expressed by the President in the capacity of the men who are now doing the work to achieve success in their difficult undertaking will be shared by all who know their ability, their determination, and the self-sacrifice which they devote to the work.

One moral of Mr. Butlin's address must not, however, be lost sight of. Reform in the realm of medicine, as elsewhere, cannot be effected by the waving of a magician's wand, but by hard unremitting and self-sacrificing labour. To those who may ask, What has the Association done for the profession? we may point to the story unfolded in Mr. Butlin's address. Those, on the other hand, who may chafe at the slowness with which the goal of our aspirations is reached, we would remind that progress is like the tide: there are times of slack water and times when it even may seem here and there to recede. But gradually it comes in stronger and faster. We have got to a point when we may say, in the famous words of Gladstone, that the flowing tide is with us.

> For while the tired waves, vainly breaking,
> Seem here no painful inch to gain,
> Far back, through creeks and inlets making,
> Come silent, flooding in, the main.

THE ADDRESS IN MEDICINE.

As year follows year, the various orators at the successive meetings of the Association are necessarily faced with increasing difficulties in their choice of a subject which shall possess not only a general interest for the profession of Medicine and even for the general public, but also—and more imperatively—a direct and practical application which may be expected to command the intelligent appreciation of the individual practitioner and stimulate him to a greater enthusiasm in his work.

In taking Etiology for the text of this year's oration, Dr. Mitchell Bruce may be congratulated upon the felicity of his selection no less than upon the lucid and comprehensive discourse—one with which those who heard as well as those who read his wise reflections and practical suggestions have reason to be well satisfied.

The opening references made by Dr. Mitchell Bruce to the advances which have taken place in Medicine since the Association last met in London fifteen years ago recall vividly the vast strides that have been made in many directions, most notably in bacteriology, which is now established as an integral and vital department of the healing art. By its aid a great light has been shed upon the cause and development of many disorders; it has also brought others within the scope of curative and preventive methods of management; while so generally recognized have many of its results become that instances are familiar to us all in which diagnosis is not regarded as completely trustworthy until it is clinched by a confirmatory report from the laboratory. But Dr. Mitchell Bruce very opportunely warns us against the risk of regarding bacteriological investigations as instruments in the elucidation of disease problems which can be handled by any and every practitioner. Such minute researches are, as a rule, too complex and delicate to be reliably conducted except in a laboratory and at the hands of experts who have been specially educated to interpret accurately the results of technical observations as well as their clinical application. He does not regard the bacteriologist as the competitor of the physician, but rather as a complement whose existence is a product of the development of science, and whose assistance clinical medicine can no longer dispense with. No instance could be quoted in which specialization is so justified, and none in which collaboration between physician or surgeon and specialist is so essential. It requires, indeed, no great gift of prophecy to foretell the creation of a custom which, in certain obscure and difficult cases, will establish the bacteriologist, not only as a laboratory

expert, to whom specimens are submitted for an abstract opinion, but as a clinical colleague who will become, conjointly with physician or surgeon, as the case may be, responsible for the bedside manangement of the patient. Such inroads in the domain of Medicine are inevitable, and in the progress of scientific advance must be regarded as evidence of a wise adaptation of practice to modern necessities.

Furthermore, it is not in the field of bacteriology alone that part of the daily work of the clinical physician is being borne by newcomers; Surgery too is encroaching upon his preserves and taking out of his hands an ever-increasing number of cases which the great work of Pasteur, Lister, Simpson, and others has enabled the surgeon to deal with effectively and with ever-increasing safety. In the name of Medicine Dr. Mitchell Bruce congratulates Surgery on the brilliant progress of recent years, and points out that though so many surgical triumphs have been won at the expense of Medicine, the general effect has been to increase the sum total of knowledge and to further the welfare of humanity.

While this is true, difficulties have arisen, and will further arise, in defining the limits of the surgeon on the one hand and of the physician on the other. If the surgeon continues to absorb the work of the physician at the present rate, it is possible that, in self-defence, the day will come when the physician may be tempted to undertake many of his own operations. It seems not unreasonable to advocate a closer union between the two leading branches of the profession in the management of cases which require an operation for the recovery of health. The diminution in the field of the physician's practice is principally due to the steady increase of surgical operations. Rather than perish, he may some day cultivate surgery as well as medicine, and this, in our opinion, would be inimical to the best interests of the profession as well as to those of the sick public.

To vaccine-therapy, which is yet another encroachment on the territory of Medicine, Dr. Mitchell Bruce refers in that spirit of cautious reserve which is known to characterize him as a clinician of the conservative and safe type. That there is a promising future for this most recent branch of therapeutics may be frankly admitted, but there is a risk of allowing enthusiasm to outrun discretion in the claims which its advocates urge in its favour. And here again it may be pointed out that "the opsonic index man" is a product of modern medicine, to be regarded as a specialist who cannot replace, nor be replaced by, the physician, but who is destined, in the fulfilment of his mission, to be the co-worker who will bring to bear on many difficult problems of diagnosis and treatment, these special inoculative measures which are calculated to stimulate phagocytosis and thereby accentuate the resisting powers of the tissues, but which are capable of efficient exhibition only by those competent to estimate results in the light of special training.

The whole tenor of the address is, in fact, a judicial and judicious plea for the conservation of energy, and for such prudent amalgamation of our increasing armoury against disease as shall enable practitioners, by wise co-operation, to fight successfully the common enemy, rather than to give him the advantage that must always accrue when the other side is weakened by internecine conflict, whether of jealousy or self-interest.

In the combat against disease the orator tells us that there are three important factors to be reckoned with: The extrinsic cause, whatever it be, without which the illness would not have occurred; the intrinsic cause, upon which depends the patient's powers of resistance; and the incidental circumstances which either favour the essential influence or, by lessening the intrinsic powers of resistance, contribute to the activity of the disease process.

Stress is laid upon the dominant position which Causation has come to occupy in the evolution of Medicine, and it is insisted upon that the most important latter-day achievements have been recorded in the field of etiology. The discovery of micro-organisms hitherto unknown; the recognition of the media by which these are brought into relation with man; the power of estimating the effects of infective processes on the various tissues and fluids of the body, are cited as illustrative examples of progress in etiological science.

The incidental circumstances by which etiology is influenced gives Dr. Mitchell Bruce his opportunity of bearing testimony to the important position which the family practitioner still maintains in the ranks of those whose life-work is devoted to the conquest of disease. It is not very unusual to hear the general practitioner slightingly referred to as one who has been driven by the circumstances of fate into a professional position which demands so much knowledge of many things that it is almost impossible for him to be up to date and thoroughly well informed on any one subject. It is beyond human power for the man in general practice to be a specialist in every department of his profession, but his outlook on disease is, in many respects, more comprehensive than that of the man whose whole life is devoted to perfecting himself in the technique and minutiae of one subject to which he gives all his energy and time. Both types of workers are necessary in these days, but it is becoming more and more fashionable for the public to seek the opinion of so-called specialists, no matter what the ailment may be; they require one man for the liver another for the stomach, a third for the lungs, and indeed a man for every organ and almost for every tissue of the body. To balance this extravagance of specialism, it is well the public should be reminded that human organs are not parcelled out into so many pigeon-holes to be dealt with individually, but that they each form an integral part of a great and complex mechanism, any portion of which going wrong necessarily inevitably throws the whole machinery out of gearing. The general practitioner possesses powers of perspective in disease entirely denied to the specialist, and he must, in the nature of things and despite all criticism to the contrary, remain not only the most useful and encyclopaedic working unit of the profession, but also the member of it to whom, at least in the first instance, the public, in their own interest, should apply for relief to their ailments. The opportunities which he has of seeing his patients repeatedly for minor disorders as well as for serious illnesses; the intimate knowledge he acquires of their idiosyncrasies; his acquaintance with their family history, habits of life, and social circumstances; his experience of the disease tendencies to which they have been born; and a hundred other details which are acquired only after long and confidential intercourse with his clients, make the general practitioner, of all medical men, the most important. It is he who is called upon to lay the basis of diagnosis, prognosis, and treatment, and to him

should be left the suggestion for special advice when, in his judgement, the interests of his patient will be well served by collaboration with one who is an authority on the particular disorder from which he chances to be suffering. We entirely agree with Dr. Mitchell Bruce when he says that "general practice is the most fruitful and promising field for the study of the natural history of disease in the living body."

This year's Address in Medicine is full of stimulating, thoughtful, and suggestive ideas on etiology as an important scientific factor in the growth and development of disease; on the essential need for its more careful and searching study; and on the opportunities such investigations afford to us all, but especially to those engaged in general practice, to extend the bounds of knowledge and increase the stock of human wisdom. If these considerations bring home to the general practitioner the important part that he plays, and should continue to play, in the great search for truth in which all medical men are engaged, the profession will owe a lasting debt of gratitude to the gifted author, and the general public will not withhold its meed of praise from one who, discerning the signs of the times, has pointed out one of the main roads along which we must travel if we are to extract from Nature those secrets which are concerned with disease in its preventive and curative, as well as in its etiological, aspects.

THE ADDRESS IN SURGERY.

In his study of malignant disease, which forms the subject of the Address in Surgery, we are glad to find that Mr. Barling takes a hopeful outlook. Though the main problem of cancer is still unsolved, and the methods of attacking it are necessarily slow and very laborious, we are, he considers, gaining ground. Not long ago it was commonly held that cancer was a systemic disease, the tumour being merely the local manifestation, and its removal nothing more than palliative. Owing to this conception, operations for removal of the growth were in most cases totally inadequate, and the speedy reappearance of malignant nodules was thought to substantiate the belief that cancer was due to a blood dyscrasia. Fortunately we adopt more hopeful and more radical methods nowadays, and by contrasting the ideas prevalent at that time with our present status of knowledge one can realize that we have indeed made substantial progress.

Turning to experimental investigations on the transplantation of mouse carcinoma, the lecturer attaches particular importance to the fact that the transplanted tumour depends for its nutrition and growth on the connective tissue cells of its host, which provide for it a new stroma and a new vascular system. "Thus we learn that experimental carcinoma is a parasite, the essential element the epithelium living its own life, and using its host as a provider of nutrition." The human subject provides, in chorion-epithelioma, a remarkably close parallel to this parasitism. Chorionic epithelium derived from the tissues of the fertilized ovum transplants itself into and grows into the tissues of the mother—a being of a preceding generation. And in the ordinary metastases of malignant tumours we have again a process closely resembling experimental transference. Particles of the primary growth are swept into the lymph or blood stream and thereby carried to distant parts, where they produce metastases which are exact facsimiles of the original tumour.

Experimental research has also been useful in increasing our knowledge of the action of radium upon malignant tissue. If a portion of mouse cancer be exposed to the action of radium for a period insufficient to produce any structural changes in it, it is rendered incapable of development when transplanted into other mice; and when a tumour has been successfully established in a mouse, exposure to radium sometimes, but not always, causes the growth to disappear. In such cases, when the tumour is studied in the retrogressive stage, the most noticeable change is an active proliferation of the connective tissues at the margin, and an invasion of the tumour parenchyma by young fibroblasts, which, as they complete their development, "contract on, strangle, and destroy the epithelial cells they embrace." In this connexion Mr. Barling states that experimental observations made for him by Mr. Percival Mills show that somewhat similar changes may be induced by radium in the liver of a healthy mouse. The liver cells undergo slight changes, from which they soon recover, but the connective tissue round the vessels and the endothelium of the vessels show marked activity and proliferation, which remain long after the parenchymatous cells have returned to their normal condition.

Passing on to the consideration of cancer in the human subject, Mr. Barling points out that we have a struggle between the tissues of the host and the parasitic cancer, and that the resisting powers of the former possess an importance which is not always clearly recognized. Though the host generally succumbs in the end, the disease is a real struggle, and in exceptional cases the resistance may be completely effective. Spontaneous cure of cancer is rare, but it has been well established that it does occur. And in the ordinary cases, where the cancerous tissue ultimately triumphs, a study of the invasive process along the lines of the lymphatics shows that there is a resistive reaction. Fibrous tissue is produced, contraction follows, and the cancerous epithelium is strangled, though, unfortunately, this process of repair does not keep pace with the invasive processes which are going on in other parts of the field. There is also well-marked evidence of resistance offered by the blood vessels. This is best seen in the lungs, where minute emboli of cancerous material may be found in the vascular system. A reaction is set up; young connective tissue develops from the intima, surrounds the invading material, penetrates it, contracts upon it, and finally destroys it. This destruction of cancer emboli, Mr. Barling maintains, "is not a mere accident, not an occasional happening, but a frequent occurrence, multitudes of metastases being thus cut short and prevented." Strong clinical confirmation of this view is afforded by certain well-authenticated cases of chorion-epithelioma, where the presence of secondary formations in the lungs was indicated by physical signs, haemoptysis, and dyspnoea. Yet spontaneous recovery followed, with complete and prolonged absence of all signs of growth either in the primary or in the secondary localities.

As to the precise nature of this resistance to malignant disease very little is known, and the lecturer is not prepared to say what are the factors which heighten or lower it, or to decide how far chemical variations in the tissues may be at work, or whether the influence of the nervous system plays any part in

the process. But one feature of the resistive and curative process, he thinks, is clearly recognizable. "This is the active part played by the connective tissues; we have an irritative overgrowth, with hyperplasia and subsequent contraction, which appears to determine the death of the epithelial cell."

In the concluding part of his address Mr. Barling discusses the all-important question of treatment. He dismisses as futile "certain modes of treatment by cancer serums, by drugs, and by enzymes." The *x* rays are useful in relieving pain, reducing the activity of inoperable growths, and healing rodent ulcers. But he is sceptical as to the absolute curative value of this method of treatment: "Personally, I have never known an unequivocal malignant growth absolutely disappear under the influence of *x* rays, though apparently others have occasionally been more fortunate." Radium appears to cure rodent ulcer, but in many of the cases treated it is too early to state with confidence that the cure has been permanent. Examining the results obtained by radium with the more serious forms of malignant disease, he finds "much that is promising but little that is conclusive." A large tumour may disappear or greatly diminish, but the subsequent reawakening of the disease is a not infrequent experience. Hence, in a case of operable cancer, he would not take the responsibility of advising treatment with radium as a substitute for excision, owing to the risk that during the time occupied by the administration of radium the disease may pass from the operable to the inoperable stage. Mr. Barling has given a fairly extensive trial of Coley's fluid in the treatment of sarcoma, but only with a limited degree of success. "In the majority of my cases no improvement has been effected, but in others I can speak of improvement which promises cure if further lapse of time confirms the results at present attained."

Operation still remains the most reliable remedy for malignant disease, and the author firmly believes that when malignant growths are excised at a sufficiently early stage of their development the cure is permanent. Results already attained, particularly with carcinoma of the breast, are highly promising; and cancer in other regions of the body would be more amenable to treatment than it is at present if it could be diagnosed in its earlier and silent stage. The difficulty of establishing a sufficiently early diagnosis is the great stumbling-block, and in the efforts to remove this obstacle, Mr Barling thinks, lies our great hope for the future. He therefore looks forward with special interest to the future achievements of the workers who are attacking the problem along the lines of biological chemistry.

We congratulate Mr. Barling on his method of reviewing this extremely difficult and obscure subject. Avoiding alike the errors of unjustifiable optimism and needless pessimism, he presents us with a level-headed and temperate consideration of the facts as they are. The success of the surgeon in dealing with cancer is increasing, and it will be greater still when scientific research has established better means for establishing early diagnosis; and we hope, with Mr. Barling, that cancer research will eventually accomplish much more, and that the time will come when the surgeon's knife is replaced by "gentler methods provided by the sciences of biology, physics, and chemistry."

THE KING AS PATRON OF THE ASSOCIATION.

AT the first assembly of the Annual General Meeting a communication from the King was read in which His Majesty stated that he was graciously pleased to become Patron of the British Medical Association. This announcement was received with loud and general cheering, testifying to the appreciation felt by the members of the prestige which the King's patronage confers on the Association. We may be allowed to express the satisfaction felt by the members of the Association that George V shows the same interest in it that was displayed by his illustrious father.

THE ANNUAL MEETING.

THE CHURCH SERVICES.

Westminster Cathedral.

IN connexion with annual meetings there is a custom thoroughly in accord with the sentiments of most members of the British Medical Association and approved by all—it is that of arranging for the holding, early in the course of the meeting, of a religious service in one or more of the principal churches of the city in which it is taking place, and for the attendance thereat in academic costume of the principal officers of the Association and as many of its members as possible. The event is a way of testifying that, whatever may be said to the contrary by individuals, medical men as a body see no essential inconsistency between science and religion. This year the services took place on Wednesday, the day on which work in the Sections commenced. The service for those who belong to the Church of Rome was held in the Westminster Cathedral, the largest modern sacred edifice in the country and so recently consecrated that probably many of those who attended High Mass at 10.30 a.m., had had no previous opportunity of taking part in a service within its walls. In spite of the fact that at the hour mentioned work in the Sections was proceeding, upwards of 150 members, many of them accompanied by their wives, were among the congregation. Before entering the cathedral they assembled at the house of Dr. Finucane, of Ashley Place, by whom the arrangements for this service had been made, and, after donning academic dress, proceeded in a body to the cathedral. On the conclusion of the service a meeting—originating in a suggestion made by Surgeon-General Maunsell—was held at Dr. Finucane's house for the inauguration of a Catholic Guild of St. Luke. The scheme put forward met with the approval of those present, and this guild is now in process of definite formation.

Westminster Abbey.

The other service was held at Westminster Abbey, and as the hour, 3 p.m., did not clash with any work in the Sections, the attendance was very large. Nearly all of those present were in academic costume, and the choir and many of the outer aisles were crowded.

The sermon was preached by the Very Reverend W. Page-Roberts, D.D., Dean of Salisbury, who chose as his text verse 11, Psalm lxxiii: "Tush, say they, how should God perceive it: is there knowledge in the Most High?" First noting the excellent moral conduct to be witnessed among members of all denominations of Christianity, and that moral excellence and philanthropic zeal distinguished many who held themselves aloof from all the Churches, Dr. Page-Roberts said that, if the question, "Does it matter what a man believes?" were asked

by one who, like Nietsche, held that "In Christianity neither its morality nor its religion are in touch with reality—it has nothing but imaginary foundations," it would probably be put in a tone which required a negative answer. But in those not disposed to say there is no truth whatever in Christian doctrines, a temper of mind which flippantly and with a shrug asked the same question was neither very admirable nor even respectable mental disposition. It was the sceptical temper, and scepticism and impotence were synonymous. Moreover, such a temper could not in its influence be confined to one department of character. It must encroach on and enfeeble the whole mind. But there were people of heavier calibre than those who were nevertheless averse to theological reflection. They had practised it, and had put it aside, not becauee they were indifferent, but because they were hopeless of reaching any certain conclusion. Such persons were not infected with the malaria of a shallow scepticism. They had potentialities of faith which might yet be realized. If the question indicated were asked seriously and not sceptically, it should be borne in mind that there were doctrines and truths both in science and theology which were essentially of a nature likely to make them ineffective so far as concerns actual conduct. They might be established as universally accepted truths; but they made no perceptible modifications in the daily life of any one. It was, for instance, certain that the earth moved round the sun, but those living in the present day were as indifferent to the motion of the earth as was the Hebrew poet who said of the earth that it is "so sure that it cannot be moved." Auguste Comte was certain that the constituents of the stellar bodies would never be known. The spectroscope has revealed them. But the discovery had made no perceptible difference in the ordinary conduct of affairs, nor even produced the company exploiter with a prospectus of their mineral treasures and alluring rising dividends. Thousands of things might be true, but for practical life they were ineffective, or, in technical terms, non-functional. After illustrating this point by considerations arising from the Nicene and other creeds, the preacher added that while certain doctrines were non-functional so far as in the present state of human knowledge they failed to cause differences of conduct among those holding or not holding them, and therefore might be regarded as pragmatical equivalents, yet it could not truly be said to be a matter of indifference what a man believed. It was culpable to be indifferent to truth, and a positive duty for individuals to hold fast that which commended itself to them as such and to diffuse it as opportunities arose. The dilettante sceptic who tolerated all creeds and believed in none was useless to the world and a quantity with which it could profitably dispense. Dr. Page-Roberts then turned to a consideration of Christian doctrines which were efficient in respect of their influence on action, including the belief that each man owed his neighbour brotherly service—not seeking only his own welfare, but seeking and serving the welfare of others. No one could deny that such teachings were of a nature to be effective, or that there must be a marked difference between those who lived in accordance with them and those who ignored them. It would seem that all who realized these practical teachings in themselves must be very much like each other—however different might be their non-effective, non-functional doctrines, they must have a family likeness. Thus it was that Christians of various and conflicting denominations were alike in piety, alike in the grace of an indwelling Holy Ghost.

After showing the great part these practical teachings of Christianity had played in the development of modern civilization, the preacher quoted Stuart Mill as saying, "The value of religion to the individual, both in the past and present, as a source of personal satisfaction and of elevated feelings, is not to be disputed," and then discussed the Naturalism, or unrestrained animalism, taught by Nietsche. Nevertheless, Nietsche did not spend the mental strength of a lifetime in hurling it against the Christian system of morals, because he regarded a man's beliefs as a matter of indifference, but the very contrary. Success for Nietsche's teaching would, however, be fatal to everything now regarded as moral. It was immoralism, and the preacher did not doubt that his hearers shared this opinion. Whatever theories medical men might entertain as to the miracles attributed to Jesus, the ineffaceable impression He left upon His contemporaries, as also upon subsequent ages, was that of a healer of sickness, a consoler of the sorrowful. He was called at times the Great Physician, and by their redeeming work medical men were His disciples. Whatever else they might think of Him, they, like Him, devoted their lives to save those who were perishing, for often, with little of this world's rewards, in secluded villages, shut up in their solitary intellectual lives, like Christ, they were healing ministers. "It is the man in you, not the beast, the Christ and not this shameless 'immoralism,' not lust but sacrifice, which is supreme, and you also have your own heroic martyrs of practice and research." It was well to remember "that retrogressive variations tend to predominate over progressive variations." Loss of Christian faith must tend to release the forces which were capable of effecting the demoralization and dissolution of a nation.

Certainly it mattered what a man believed: were such a wild-beast morality as that of Nietsche to supplant the morality of Christ, it would supplant, too, the medical man's mission of mercy. "Will you renounce your healing art and Christ-like work and adopt this new Evangel of Immoralism, this bride Force with its unfettered lusts, and teach it to your wives and sisters, your sons and daughters? Shall we tell them to be strong and shameless and glut their appetites and crush the weak, or use them for their pleasure, and scoff at the God of Heaven and the 'aforesaid Jesus'? Or shall we abide in the old faith and make it more effective?"

Prolegomena.

This is a week when the foundations of scientific beliefs are being probed by no less than twenty-one distinct groups of medical men. So there must be some hazard in assuming that even a theory so ordinary as that "everything must have a beginning" still remains unshaken. Doctrinally it may be unsound, but, so far as these notes on the Annual Meeting are concerned, it is a practical and somewhat serious fact. The first problem is where they should begin, and by way of cutting the knot, both appropriately and in accordance with precedent, the religious services have been placed first, though they were by no means the first occurrences in point of time. Another conundrum, which would be differently solved by different people, is, What was really the beginning of the meeting? Nominally it began last Friday, when a formal General Meeting followed in the afternoon by an Extraordinary General Meeting, took place. Both were very brief, and thereafter followed an official vacuum in the Annual Meeting's existence. It lasted until Tuesday, when things started again with the installation in the afternoon of

the new President, Mr. Butlin. But the worst of air-pumps could scarcely provide a less real vacuum, for throughout its nominal duration things—to speak *more Americano*—were humming. Members began to assemble much earlier than is usual, and even so soon as ten o'clock on Monday morning the reception room officials were fully at work and the registration tables thronged. The interval had also been a busy one for the Representatives of Divisions, whose official doings are fully recorded elsewhere. In this place, however, it may be mentioned that in its treatment of the Representatives, the Metropolitan Counties Branch—the hosts for the year—made a new and happy departure. On the termination of the first day's work on Friday, the Representatives met at the Waldorf Hotel at a dinner organized by the Branch, which, in addition, arranged for their benefit some expeditions to cover the week-end, and reduce any tension created by four strenuous meetings. One of these expeditions was to Folkestone and thence across the water to tea with the Mayor of Boulogne, the other to Henley. Neither was favoured by good weather, but both, by all accounts, fully met their intention in a pleasant easy-going way. For those who preferred to spend Sunday in town, the Branch secured tickets for the Zoological Gardens. Sunday is an especially favourable day to visit these Gardens, since none but those possessed of Fellows' tickets are usually admitted, so there is never any crowding. All these arrangements which were in charge of Mr. H. D. Ker, as Chairman, and Dr. E. R. Fothergill, as Honorary Secretary, seem to have been greatly appreciated both by Representatives and also by the various Colonial delegates and other visitors invited to take part as guests.

THE FIRST GENERAL MEETING.

THE Annual General Meeting was opened in the Court of Common Council Chamber, Guildhall, London, on Friday, July 22nd. The members were welcomed by the Acting Lord Mayor, Sir Horatio Davies, who formally opened the meeting. A vote of thanks to him was proposed by the Chairman of Representative Meetings, who happily described the Annual Representative Meeting as the Parliament of the Medical Profession. That day the Medical Parliament celebrated its seventh birthday. The motion was carried by acclamation.

PRESIDENT-ELECT'S DINNER.

ON Monday, July 25th, Mr. Butlin, President-elect of the British Medical Association, entertained the Representatives and others at dinner at the Hotel Cecil. Among those present were Lord Ilkeston, Sir William Church, Sir Henry Morris, Sir T. Lauder Brunton, Sir F. H. Champneys, Sir John Tweedy, Sir Victor Horsley, Sir William Collins, M.P., Sir James Barr, Mrs. Butlin, Dr. Lucas-Championnière (Paris), Mr. Edmund Owen (Chairman of Council), Dr. Charles Williams, Dr. Sinclair, Professor Crile, Dr. Cardenal, Professor Baümler, Dr. W. Collier, Dr. Norman Moore, Dr. Mitchell Bruce, Dr. Ford Anderson, Dr. de Havilland Hall, Dr. Theodore Williams, the Master of the Apothecaries' Company, Dr. Depage, Mrs. Scharlieb, M.D., Mr. C. Mansell Moullin, Sir R. Havelock Charles, Sir Anderson Critchett, Sir Watson Cheyne, Professor W. Thompson, Mr. Donald Armour, Dr. Edwin Rayner, Professor Starling, Professor Elliot Smith, Surgeon-General Branfoot, Professor A. H. White, Dr. Bashford, Dr. Murray, Dr. E. J. Maclean (Chairman of the Ethical Committee), Dr. J. A. Macdonald (Chairman of the Medico-Political Committee), Mr. Guy Elliston Financial Secretary), and Mr. Smith Whitaker (Medical Secretary). Mr. Butlin proposed the toast of "The King," and also the toast of "Queen Alexandra, the Prince of Wales, and the rest of the Royal Family." Lord Ilkeston, who was received with loud and prolonged applause, said that when he entered the room an important official of the Association informed him that there were to be no speeches—an announcement which he received with the most complete satisfaction; but, the same gentleman hastened to add, they could not, in an assembly like the present, let the proceedings go on very long without expressing to the President-elect their best wishes for a happy year of office. He desired, as one of the oldest members of the Association, and one who some twenty years ago first induced Mr. Butlin to take the office of Treasurer of the Association, to say how they all rejoiced that he was their President for the ensuing year. During Lord Ilkeston's long memory of the Association there had been few men more capable of filling the office of President with grace, with eloquence, with dignity, and with business-like aptitude, and he was sure that they one and all, from the humblest member of the Association to the wife of the President-elect, who was present that evening, wished him long life and happiness, and a most successful and happy year of office. He gave them the toast of "The Health of the President-elect of the Association—their host that evening." The toast was received with loud applause, and was followed by the singing of "For he's a jolly good fellow." Renewed applause greeted Mr. Butlin when he rose. He said that, although it was contrary to the order of the night that there should be any speeches, he could not restrain his old friend, whom he formerly knew as Sir Walter Foster, from getting up to propose his health. He hoped to be able to carry through the business of the congress to the satisfaction of the Association which had elected him to be its President. For himself he would have felt more comfortable if the toast had been proposed on the following Friday than that evening, but he accepted their kind wishes, and was very grateful indeed. To Lord Ilkeston he tendered his special thanks. When he first became a member of the Council, Lord Ilkeston was one of the most prominent members of the Association; and when the other day he (Mr. Butlin) had been asked at the Council if he would propose a vote of congratulation to Lord Ilkeston on his elevation to the Peerage he did so with the greatest pleasure. He was called upon at a moment's notice to write down the terms of the vote of congratulation, and he wrote down a number of things, but even then he found that he had forgotten more than half that Lord Ilkeston had done for the Association. Lord Ilkeston had done, he thought, more than any living man for the British Medical Association, and for the public measures which had been brought before Parliament by the Association and by the profession. Mr. Butlin had no hesitation in saying that there was no person in the medical profession better fitted to represent its members in the House of Lords than Lord Ilkeston. They might, of course, have found many men distinguished in their profession, and they might also have found men who had given a great deal of attention to measures connected with public health, and they might also have found men who had done a great deal of municipal work, and have found men who had worked hard for the Association, but he was sure that there was no person in their profession at the moment who combined all those qualities in the way that Lord Ilkeston did. In conclusion, he begged to offer Lord Ilkeston his heartiest congratulations that night before the assembly on the honour which had been done him, and the honour which had been done to the

profession, and they ought to congratulate themselves upon the advantage likely to accrue to the country, the House of Lords, and to the profession from the fact that Lord Ilkeston had been raised to the peerage. (Loud applause.)

DINNER OF THE REPRESENTATIVE MEETING.

UNDER the presidency of their Chairman, Mr. Ballance, the Members of the Representative Meeting, to the number of 160, dined together in the Waldorf Hotel, after the conclusion of the first day's business, on Friday, July 22nd. The attendance was conveniently grouped around small tables with due regard to geographical distribution. The only toast was "the King," after which the Meeting acquired a mobility previously impossible, and listened to a varied and lively programme of song, anecdote, and recitation, to which Dr. Macfie of Bolton, Dr. Graham of Carlisle, Dr. Harvey Hilliard of London, Dr. Wynne of Leigh, Dr. Metcalfe of Bradford, Dr. Drummond Morier, Dr. Drury of Halifax, Dr. Trotter of Perth, Dr. Maclean of Cardiff, Dr. Grant Davie of Manchester, and Dr. Sansom of West Bromwich contributed.

The following was a "topical" song by Dr. Buist of Dundee:

When Association duty's to be done,
The Secretary's lot's a happy one.

I

When the anxious-minded junior's not inquiring
The multitude of things he'd like to know,
And the much experienced senior's not aspiring
In his genial little way to run the show:
In short as soon as ere the meeting's over
The Secretary's "minutes" measure hours,
And the time he'd like to smoke and feel in clover,
Is a fume of motions, riders, rulings, powers.

II

At a meeting when the quorum's long a-coming,
Or the Treasurer's report has missed the post,
Or the business of the evening's not a-humming,
There's the Secretary's bacon still to roast.
He makes meetings for the men who don't attend 'em,
And he learns the weekly SUPPLEMENT by rote,
He must give the apathetic referendum
And explain why they don't have a postal vote.

III

He hears haughty voices sneering at "Trades Union"
When his Branch is busy battling with the "Clubs,"
Or a doctor who's less often in communion
Than he is, let's say, for instance, in the pubs;
He must study up the actions and reactions
Of the algebraic quantity "Rule Z,"
It's the nearest thing to telling truth to fractions,
And would worry even a wig right off its head.

IV

And when the annual dinner's nearly done,
And toast and song and story follow free,
Throwing chestnuts at his head is pretty fun—
So they double every year his salaree.
But at last when all emotion's ripe and mellow,
Though they dearly love to chaff him now and then
They sing in hearty round, "He's a good fellow,"
And he knows that he's a man with other men.

When Association duty's to be done
The Secretary's lot's a happy one.

Dr. MacLaurin of Sydney acted with great skill and good nature as accompanyist to the singers.

THE SIZE OF THE MEETING.

AMONG the contents of the first issue of the *Daily Journal*, dated Tuesday, were passages amply, if silently, indicative of the added difficulty of arranging a meeting in a town so vast and, from a social point of view, so peculiarly constituted as London. The information given as to business arrangements showed that the authorities of the Metropolitan Counties Branch, with Mr. Butlin at their head and Drs. Lauriston Shaw, W. Griffith, and E. W. Goodall as general secretaries, had had to divide their labours among as many as twenty-eight committees and subcommittees. A rough calculation shows that their members numbered altogether some 200 persons. Many of them would seem to have doubled their parts, and all of them must presumably have done some very hard work. We have the best of reasons, namely, personal observation, for stating this was emphatically true in the case of several of them. The Ladies' Reception Council, which has the Countess of Aberdeen as its President, Mrs. Butlin as Vice-President, Dr. Mary Scharlieb as Chairman, and Dr. Ethel Vaughan-Sawyer as Honorary Secretary, numbers about a hundred members, all being ladies and a larger proportion of them women doctors. It has subdivided its work among four committees, one taking charge of the evening entertainments for ladies, and another of the excursions, intended to while away the time during the morning of those who have accompanied members to the meeting but cannot join in the work of the Sections. There is also a very useful committee which receives ladies on their arrival in the reception room. At no previous meeting have we seen the resources and energies of all engaged in the conduct of matters executive and administrative so thoroughly taxed. One reason for this circumstance is supplied by the same first issue of the *Daily Journal*, which at the end contains a list of the members who notified their intention to attend. It covered fifty pages, averaging fifty names on a page, so that, apart from ladies accompanying members of the Association, the meeting started life, so to speak, with about double the highest number of members registered in any previous year.

ANNUAL MEETING LITERATURE.

THOSE who have frequented Annual Meetings during the last few years have grown accustomed to receiving a book descriptive of the place in which the meeting is being held. Some of them must have wondered if this custom would be maintained in connexion with the present meeting, and if so, in what fashion a guide book to a place such as London could possibly be constructed. The booklet placed in their hands on presenting themselves at the registration office answered both questions in very satisfactory fashion. It was a neat octavo, not too heavy to carry, giving succinct accounts of the principal objective features of medical life in London, of the museums connected therewith, of such public buildings as are likely to interest attendants at scientific meetings, and information as to present methods of locomotion—tubes, trains, and motor omnibuses—taxi-cab regulations and distances from various parts of London to the Imperial Institute. There are several features in the book which would make it worth preserving independently of its value as a memento. In addition to the letterpress it contains some portraits of medical celebrities, a view of the buildings devoted to the University of London, two or three clear maps, and a coloured engraving of the badge presented by the Metropolitan Counties Branch to be worn by each successive President. It is a thoroughly useful book, and the subcommittee, headed by Dr. H. D. Rolleston, which was responsible for its production, is to be congratulated on the outcome of its labours. In the same connexion may well be mentioned the usual member's admission card, for even so essentially humdrum a production has been treated on artistic lines. The space on the front page for the member's name has above it a neat

engraving of the Association's new premises, the whole being framed in an heraldic design, whereon can be found the coat of arms of each of the colonies in which Branches of the Association are established. Another volume which was received by those not so unwise as to overlook the Medical Museum was a catalogue of nearly 400 pages, relating to several thousand specimens, each described at sufficient length to meet the needs of most visitors. To have compiled such an excellent pathological catalogue in connexion with an exhibition which, unfortunately, can only remain open for a few days, is a distinct achievement, and one for which Mr. Armit the Honorary Secretary of the Museum Committee, is entitled to much credit. Included in the catalogue is a list of pictures and other like objects of medical interest which were got together by Dr. A. J. Oxley, and form a separate exhibition.

THE PRESIDENT'S ADDRESS.

THE success of the General Meeting at the new St. James's Hall on Tuesday evening was somewhat marred by the regretted absence, through illness, of Major George Lamb, Director of the Pasteur Institute in India. He was to have received in his capacity of Senior Member of the Plague Research Commission the Stewart Prize as a mark of recognition by the Association of the value both of his own work and that of each of those who have shared his labours on the Commission in question. Otherwise everything went off in the happiest possible fashion. The Hall proved well suited to its purpose; most of the members present had complied with the request as to academic costumes, and Mr. Butlin, who delivered his address without a single note, was in excellent voice. Before he commenced, the Right Hon. Walter Long, formerly President of the Board of Agriculture, one of the Honorary Members elected earlier in the day, was introduced, and acknowledged the honour conferred upon him in a happily-worded speech, an account of which will be found elsewhere. In accordance with precedent, there were also introduced such of the delegates to the meeting from Oversea Branches and Divisions as were present on the occasion. There were an unusually large number of them, the list containing some seventy-two names. Branches situated within the borders of the Indian Empire sent fourteen, Egypt four, Gibraltar two, Ceylon one, Hong Kong and China five, Natal and South Africa three, Canada fifteen, New Zealand four, and Australia twenty-four. The names of the delegates, as also of the foreign visitors similarly introduced, will be found in the matter relating to this meeting in the SUPPLEMENT (p. 223).

SOCIAL FUNCTIONS.

MANY members of the Metropolitan Counties Branch have foreign and other guests staying with them, and a great deal of hospitality in the way of dinners, luncheons, "at homes," and the like, has been and still is in progress. The first, and in some respects the most important, of these functions was the dinner party given on Monday night by Mr. Butlin, of which some account has already been read. Though Mr. Butlin invited his guests in the capacity of President-elect, the entertainment was in all essentials a private dinner party. As such it must have been one of the largest on record, for the assembly numbered upwards of 350 persons. On Wednesday Mr. and Mrs. D'Arcy Power received at tea a very large party which they had previously taken on an exploring expedition to St. Bartholomew's Priory Church and the Barbers' Hall, a place rarely thrown open to inspection. On the same day the President and Council of the Royal Sanitary Institute were "at home" at their excellent new premises in Buckingham Palace Road, and the Society of Medical Officers of Health was ready to refresh all visitors between 4 and 5 in the afternoon. In the evening the Society of Apothecaries gave a dinner party in the ancient hall of the guild in Water Lane, Blackfriars, and a civic reception, which upbore the traditions of the City of London, took place at the Guildhall. Meantime there had been two garden parties in progress, one at St. Bartholomew's Hospital, following the luncheon in honour of Mr. Butlin, and the other at Bethlem Royal Hospital. The fact that the weather broke the July record by being quite fine made these assemblies all the more enjoyed, but there is so much to see at both the institutions in question that guests were fairly independent of atmospheric conditions. At Bethlem Royal Hospital the guests were received by Sir George Faudel Phillips and the Hon. Mrs. Tufton, and tea was served in the grounds to the strains of the band of the Coldstream Guards. Those who desired it were given an opportunity of going over what is in many respects a unique institution, a place which for many years past has been conducted by Dr. Hyslop on the lines of a hospital for the mentally ill and not as an asylum for the insane. Among the guests were some of the foreign visitors to the meeting and the Commissioners in Lunacy, and many of the governors of the hospital.

ST. BARTHOLOMEW'S HOSPITAL.

AS is well known, the new President, Mr. Butlin, is Consulting Surgeon to St. Bartholomew's Hospital, and until a few years ago played a very active part in connexion with its medical school. It was natural, therefore, that there should be a desire to seize the present opportunity of doing him special honour, and of emphasizing the direct relation established between this leading medical school and the Association. It took the form of a luncheon party on Wednesday in the Great Hall of the hospital, and one on a large scale. The chairman was the Senior Physician of the Hospital, Dr. Norman Moore, and the hundred guests included Professor Robert Saundby of Birmingham, Sir William Church, late President of the Royal College of Physicians; Professor Howard Marsh, the friend and teacher of several generations of St. Bartholomew's students, but now of Cambridge; Sir Lauder Brunton, Mr. Harrison Cripps, Sir Francis Champneys, Chairman of the Central Midwives Board; Professor H. Meyer, Dr. Mary Scharlieb, President this year of the Section of Gynaecology and Obstetrics; Dr. Lucas-Championnière of Paris, Professor T. Kocher of Berne, Mr. Anthony Bowlby, Sir Victor Horsley, Dr. Barany of Vienna, Dr. R. W. Philip of Edinburgh, Professor C. Baumler of Freiburg, and many other of the foreign visitors whose names appear in the list of those introduced to the President on Tuesday evening. The Vice-Chairmen were the Dean of the School (Dr. T. W. Shore), Dr. H. Morley Fletcher, Mr. H. J. Waring, and Mr. McAdam Eccles. It need scarcely be said that the toast to Mr. Butlin, proposed by the Chairman after the usual loyal toasts had been duly honoured, was drunk with enthusiasm, and accompanied by very sincere good wishes. In acknowledging it Mr. Butlin mentioned that the British Medical Association had now chosen London as the place for its Annual Meeting on four occasions, and that of those who presided thereat there now stood two to the credit of St. Bartholomew's. On the conclusion of the luncheon proceedings, the guests broke up into separate groups, which visited different

departments and wards of the hospital. Much the same course was followed by many of those attending the garden party which subsequently took place.

Other Associations.

As usual, a number of bodies which are more or less connected with the Association, but are organized on a separate basis, have been taking advantage of the assembly of so many medical men to hold special meetings. The list of them, which is unusually long, includes the Society of Members of the Royal College of Surgeons of England, which held a meeting on Tuesday evening at Upper Montague Street, with Dr. Joseph Smith, its president, in the chair; and the Medical Libraries Association, an admirable body which started about the time of the Belfast meeting last year what we hope will be a very successful existence. It held a formal annual meeting on Tuesday, and on Wednesday commenced in one of the rooms of the Imperial Institute the reading of sundry papers on special points in what may be regarded as a new art—the organization and utilization of libraries mainly medical in point of contents and object. On Wednesday the Irish Medical Schools' and Graduates' Association held a meeting, followed by a luncheon party, at the Holborn Restaurant, and on Thursday the National Temperance League gave its annual breakfast, followed by short addresses; it has for long past been a familiar feature of all annual meetings, and a popular one as well, despite the painfully early hour of rising imposed on those who attend it. This year the president was Mr. Pearce Gould, and the principal speaker the Bishop of Kensington. The same day the Continental Anglo-American Medical Society assembled at luncheon at the Café Royal, and extended its hospitality to a good many members of the British Medical Association who are not qualified by virtue of their place of residence for membership of this semi-foreign body. Other meetings which have still to be held are those of the Poor Law Medical Officers' Association, of the Association of Medical Officers of Health, and of the United Kingdom Police Surgeons' Association. All three are to take place in the Council Chamber at 429, Strand, at different hours on Friday this week. Further references to the occurrences at these different meetings will be made at a later date.

The Regalia of the Association.

The regalia of the Association are growing apace, there having been two additions this year to the Association's possessions of this order. The first is a hammer presented to the Representative Body by its members at the special meeting last June. It is a gift which may be taken as equal evidence of just recognition of the importance and dignity of the office held by the Chairman of this body, and of the fact that there might conceivably be occasions when order would require to be kept firmly. From either point of view the hammer presented would seem an equally effective gift. It is of solid ivory, with a gilt serpent twining round the handle, the handle and head being further enriched with silver mounts, and the head bearing an inscription of suitable kind. The serpent is, of course, intended to suggest the staff of Aesculapius. The other gift is a badge of office presented to the Association, on Tuesday afternoon, by Dr. Ford Anderson, on behalf of the Metropolitan Counties Branch, to be worn by each successive president. It is a gold and enamel plaque attached by four flat buckles to the ends of the ribbon-collarette. Two of these flat gold buckles, or links, bear in red enamelled letters the names Great Britain, Canada, India, Australia; the others Ireland, West Indies, South Africa, New Zealand. These are attached to the badge by an open-work shield with the monogram of the Association as its centre. As for the badge, this bears a figure of Hygeia clad in the loose garments commonly known as classic, and holding in her hand a cup and a snake. The latter looks very much alive, and would probably be described as rampant by an heraldic expert. Around this centre-piece are floral emblems indicative of the principal British Overseas Dominions; a maple for Canada, a sugar-bush tree for Africa, a lotus for India, a wattleflower for Australia, and the tree-fern for New Zealand. At the top angle of the outside frame is to be found the rose of England, at the bottom the thistle of Scotland, on the left side the shamrock of Ireland, and at the right side the leek of Wales. Those hide-bound by tradition, and hypercritical in such matters, might possibly look learnedly askance at certain features of the badge, but no one can deny that the general effect is excellent, and that the badge is worthy of its high purpose. It is intended that a reproduction of it on a smaller scale shall be presented to each president as a personal gift and memento of his labours during his year of office.

The Medical Museum.

There have been excellent collections of pathological specimens at most of the Annual Meetings during the past few years, and several of them have been of a very successful and useful kind; but the like exhibition opened this week transcends all previous efforts in this direction. It is so large and covers so much new ground as practically to represent a new departure. In view of the extension of *terrain* the adjective officially applied to it this year is not "pathological," but "medical," and for corresponding reasons the term "museum" might itself also have received some addition. It is not a heterogeneous collection of valuable specimens, but a museum carefully divided up into various sections, each under the care of an expert honorary curator. Moreover, an element of life, as distinct from morbidity and death, has been introduced by most of the curators, who, not contenting themselves merely with showing specimens, have made an endeavour to bring home to visitors how those specimens were prepared. In this way the collection of specimens ceases to be what is commonly called a museum, and fulfils a double purpose. It furnishes instructive object lessons in the latest methods employed in clinical laboratories for the purpose of diagnosing disease and determining the treatment to be followed, and also displays those used in the annexes of museums, where specimens are examined with a view to acquiring knowledge of disease processes, and thus opening a way to the solution of etiological problems. In one sense, of course, the valuable character of the museum need cause no surprise, since the Museum Committee has been able to draw on nearly all the medical schools in London, as well as on the Museum of the Royal College of Surgeons, and on the pathological treasures of many private individuals. But the same facilities might have been offered with very different results. Specially interesting to many visitors is proving the section devoted to the subject of anaesthesia, which was organized by Dr. Ada Browne, of the Chelsea Hospital for Women, and includes the series of quaint documents on which is founded the claim of Dr. Crawford Long, of Georgia, U.S.A., to be regarded as the originator of surgical anaesthesia. There is also a kind of annexe to the museum in the form of a series of pictures illustrative of the doctrine of palaeogenesis as supported by the coloration of

animals. This separate exhibition was supplied and arranged by Sir Jonathan Hutchinson. A technical account of the museum and its contents commences elsewhere in this issue.

ENTERTAINMENTS.

THE relaxations provided this year are on a scale corresponding to the magnitude of the meeting and of so varied a character that it is difficult even to classify them either succinctly or very clearly. Before the meeting commenced there were those who deemed the preparations made too extensive, and prophesied that on many of the expeditions in view and entertainments organized an adequacy of guests would be lacking. But these Cassandras have been pleasantly disappointed. For many entertainments a shortage in tickets set in quite early, and for all the demand has been so great as almost to exceed the possibility of meeting it. In a measure this result may be due to a change made this year in the method of distributing tickets, namely, that of asking members to apply in advance. If so it is a plan which should again be adopted, for it is always greatly to be regretted when pipers play but dancers fail to respond. On this occasion the plan has, in some respects, not perhaps worked to universal satisfaction, because many were not aware, it seems, that previous application was necessary, and failed of success at the second ballots for tickets, which have taken place. However, there has been, and still is, so much going on that few, if any, members can have been altogether disappointed. There has also been London itself to fall back on, and practically every general hospital in London has made special arrangements to show visitors everything of which each institution is most proud. For the less scientifically minded, there are visits to great London residences, such as Apsley and Stafford House, special arrangements for visiting the Mint, the Royal Stables, a great number of premises where interesting manufactures are carried on, golf matches, luncheon and dinner parties, garden parties at Ranelagh and elsewhere, conversaziones—in short, almost every kind of entertainment which the wit of man has devised for his hours of ease. At the time we are going to press there is in progress at the Connaught Rooms the Annual Dinner of the Association, and also the Dinner and Reception at the Lyceum Club organised for ladies by the Committee appointed *ad hoc*. On Friday follow, among other things, an expedition to St. Albans on the invitation of its medical Mayor, Dr. E. H. Lipscomb, and the reception given by the Metropolitan Counties Branch at the Natural History Museum. On Saturday there are as many as four excursions in view—to Bath, to Alton, Eastbourne, and Brighton respectively.

JOHNSONIAN HAUNTS.

ON Tuesday afternoon there was an entertainment of quite a unique character—an exploration of Johnsonian haunts. It was organized and conducted by Dr. Withers Green, who has the lore of the eighteenth century and historical London in general at his fingers' ends. He proved an admirable cicerone, and his accounts of the various places visited were greatly appreciated. By a happy thought he used a megaphone, and thus every one was able to hear without difficulty—a rare circumstance on like occasions. The party met at his house in Wardrobe Place, Doctors' Commons, a locality whose name is itself reminiscent of the past. There the ladies of the party took tea, while the gentlemen were similarly engaged at an adjoining restaurant. Dr. Withers Green had on his list no less than forty places associated with his subject, and managed to give temporary life to the dry bones of practically all of them.

The expedition will be repeated to-day, Friday afternoon, at 4.30 p.m., and will doubtless be well attended by those who have not escaped the fascination of a peculiarly interesting period of English history. It is one with which every one is more or less acquainted, but to which no readily get-at-able book, is specifically devoted. Still less is there any adequate guide book, even if any guide book ever written could be as effective and illuminating as clearly-worded verbal accounts, coupled with a view of what vestiges of the past remain.

THE NEW HONORARY MEMBERS.

THE honorary membership is the highest honour that the Association has in its power to confer, and the fashion in which the Council has exercised it is sure to be welcomed this year. Both Lord Crewe and the Right Honourable Mr. Walter Long are so well known to the general body politic of medicine that their names would certainly have been sent in had nominations for the honour been left to the ordinary members of the Association. Throughout his service with the present Government Lord Crewe has been conspicuous for his disregard of red-tape methods and for his readiness to endeavour to appreciate the medical side of public questions. As for Mr. Long, his great work in applying the teachings of science to the extinction of rabies in these islands, is too well known to require more than mere mention.

THE ANNUAL EXHIBITION.

THAT no one would be able to examine everything to be seen at the Annual Exhibition of this year goes without saying, but it may even be doubted if, at the end of the meeting, any one will be able to boast that he really visited each separate stall. There are nearly 180 of them, and on practically every one there are things calculated to make most visitors linger. This year the radiographical and other electrical appliances have been housed in a separate room, with a view to the *cognoscenti* being able to examine the exhibits undisturbed by the *x*-ray unlearned. It is a plan which seems to have worked well, and has certainly been appreciated both by exhibitors and visitors. The rest of the exhibition has also been divided into two parts, but merely by way of securing adequate room for each exhibitor. Never have the latter had such magnificent rooms placed at their disposition. They doubtless share the gratitude felt by the members of the Association at the kindness of the authorities of London University and other bodies concerned in allowing the Royal College of Science and the home of the university to be used for the general purposes of the meeting. Possibly, however, they would have been still more obliged if the authorities in question had rubbed some scientific Alladin's lamp and transported the whole of the buildings for the occasion to Trafalgar Square. We hope we are mistaken in this belief, for it would be a great pity if it were found that, owing to the necessity of reaching more central parts of London, members had hastened away from the Section work at South Kensington too quickly for the attendance at the Exhibition to be proportionate to its great scale This regret, which we hope will prove unfounded, would be generally shared were it known what an immense amount of fatigue and expenditure of energy these Exhibitions entail upon all concerned. To members they offer the supreme advantage of being able to see without difficulty or fear of importunities

to make purchases, everything which is new in the way of instruments, books, hospital and surgical appliances, chemical preparations, and all other things intended to facilitate medical and surgical practice in all its branches. An account of some of the more attractive items will be commenced in the Supplement next week.

At a meeting of the Council held on Wednesday, July 27th, Dr. J. A. Macdonald was elected Chairman in succession to Mr. Edmund Owen. Dr. Macdonald's large experience of the work of the Association, his administrative ability, his tact and geniality in dealing with men, and his statesmanlike breadth of mind, make his election to this most important post a happy augury for the future of the Association.

The success with which Dr. Rayner has managed the finances of the Association during the past three years—a task which owing to the expansion in various directions of the activities of the Association has become one of heavy responsibility and difficulty—was shown by the fact that he received the rare honour of re-election for a further term of office. The proposal, which was moved by Sir Victor Horsley and seconded by Mr. Straton, was received with loud applause.

The total number of members registered as present at the meeting up to the time of going to press is 2,500.

ANNUAL REPRESENTATIVE MEETING.

NOTES.

The Representative Meeting held its Annual Meeting this year in the Guildhall, kindly lent for the purpose by the Corporation of the City of London. Mr. H. A. Ballance was in the chair, and 146 Representatives and 30 Members of Council were present on the first day. The attendance was maintained with very slight diminution throughout the sittings. The meeting lasted four days, beginning on Friday, July 22nd, and ending on Tuesday, the 26th. On Friday the proceedings began at 10 a.m., and were continued, with intervals for luncheon and tea, till 6.30. On Saturday the meeting continued its deliberations from 9.30 a.m., with an interval for luncheon, until 5 p.m. On Monday it assembled at 10.15 a.m., and sat, with the usual adjournments, till 6.30 p.m. On Tuesday it began work at 9.30 a.m., and after a brief interval for luncheon completed its labours at 4 p.m.

The amount of business which the meeting dealt with was large in volume and complex in details; the discussions were throughout animated, and were marked not only by practical knowledge, but by remarkable debating power. In the Annual Representative Meeting of the Association the medical profession has a vigilant and intelligent guardian of its interests. The successful manner in which the meeting got through its work was largely due to the tact and ability shown by Mr. Ballance in managing the assembly; whenever the debate showed a tendency to wander he brought it back to the right track with firmness tempered by perfect courtesy.

It was with great regret, therefore, that the meeting heard Mr. Ballance's statement that he would be unable to continue to discharge the duties of Chairman of Representative Meetings. There was only one nomination to the post vacated by Mr. Ballance, and Dr. Maclean, Chairman of the Central Ethical Committee, was accordingly declared duly elected. In acknowledging his election, Dr. Maclean made graceful reference to the honour done him in his being chosen to succeed such men as Sir Victor Horsley, Dr. Macdonald, and Mr. Ballance. He felt very keenly the responsibility placed upon him of having to preside over the deliberations of a meeting which represented the true hopes and aspirations of the profession at a time when it was passing through an economical crisis without precedent in its history. But he assured the meeting that he would spare no effort to carry out as effectually as he could the duties of the position to which he had been elected.

A vote of thanks to Mr. Ballance was proposed by Dr. J. A. Macdonald, who expressed the sentiments of the meeting when he spoke of the sorrow with which they heard that Mr. Ballance had come to the decision not to accept office for another year. He paid a well-merited tribute to the ungrudging manner in which Mr. Ballance had devoted himself to the conduct of the affairs of the Association. The motion was seconded by Dr. Maclean, who in alluding to the fact that during the past year Mr. Ballance's civil state had altered, took the opportunity of wishing Mrs. Ballance and him long life and every happiness. The motion was carried by acclamation. Mr. Ballance, in acknowledging it, said he had sometimes thought that as he had been Chairman of the Contract Practice Subcommittee for two or three years, that perhaps might have had something to do with the fact that he had lately entered into another contract. Throughout this part of the proceedings there was a ring of geniality and personal friendship which may be taken as a proof of the harmony with which the high officials of the Association work together.

Later it was announced that Mr. T. Jenner Verrall had been elected to the post of Deputy Chairman. The announcement was received with loud applause.

On Friday the Treasurer, Dr. Rayner, read a letter from Dr. Dawson Williams in reference to his accident, mention of which has been made in the Journal. In it he stated that he had been kindly and skilfully attended by Mr. Jamison of Horsham, the Honorary Secretary of that Division of the Association, and had had the advantage of the opinions of Dr. Howard Tooth and Mr. Robert Jones of Liverpool. Dr. Rayner suggested that the meeting should send Dr. Dawson Williams an expression of sympathy with him in his misfortune, together with an expression of hope for his complete recovery. This was unanimously agreed to with great cordiality. On Monday the Treasurer read a further letter from the Editor, expressing his heartfelt gratitude for the sympathetic resolution adopted by the Representative Meeting. Dr. Rayner added that Dr. Williams's progress was considered satisfactory, an intimation which was received with pleasure by the members.

The most important business done by the meeting was the adoption of the Draft Memorandum of Association of the proposed new Company. It was fully discussed, clause by clause, and, after some amendment, it was moved and resolved *nemine contradicente*, "That the Council should proceed forthwith to take the steps necessary to the formation of a new Company, incorporating in the same manner and having the same Articles of Association and By-laws as the present Company as constituted at the time of application." Many other matters directly

affecting the welfare of the public and vitally concerning the future of the profession were discussed. Among these may be mentioned the question of the reform of the Poor Law, State registration of nurses, rules of nursing associations, the ethics of consultation, medical ethics, prescribing by chemists, the relation of the Association to homoeopaths, ambulance lectures, and the position of practitioners examining on behalf of interested persons. A full report of the proceedings is given in this week's issue of the SUPPLEMENT. The report, it may be stated, is considerably longer than any that has appeared in former years.

THE following twelve Representatives were elected by the meeting to the Council: Dr. J. Macdonald (South Shields), Mr. T. W. H. Garstang (Altrincham), Dr. W. A. Carline (Lincoln), Dr. H. Jones-Roberts (North Wales), Dr. E. W. Goodall (City), Dr. H. R. Ker (Wandsworth), Mr. C. E. S. Flemming (Bradford-on-Avon), Dr. J. J. Macan (Croydon), Dr. M. Dewar (South Edinburgh), Dr. J. Grant Andrew (Glasgow), Professor A. H. White (Dublin), and Dr. C. E. Shaw (Belfast).

THE SECTIONS.

BRIEF SUMMARY OF PROCEEDINGS.

THE character and scope of the work of the different Sections will appear from the following short summary of the proceedings. A full report of the discussions and of the various papers read in the Sections will be published in due course.

Wednesday, July 27th, 1910.

SECTION OF ANATOMY.

PROFESSOR ARTHUR KEITH presided over this Section, which was numerously attended. After a few words of welcome, the President initiated a discussion on the question of supply of anatomical material. Two resolutions were submitted and agreed to: (1) That it was now desirable that concerted action be taken by the representatives of all the medical schools in the country; and (2) that the licensed teachers present at the meeting of the Section of Anatomy be asked to constitute themselves a committee to consider the supply of material for anatomical and operative surgery teaching throughout the United Kingdom and Ireland. Professor Symington, F.R.S., gave a communication on the pharyngeal tonsil. By means of sagittal sections and dissections he showed the form and position of this structure in fetuses, young infants, and children. Placed in the roof and on the posterior wall of the naso-pharynx, it began quite close up to the nasal septum and extended backwards as far as the middle of the basi-occipital element, and where it ended the superior constrictor began. From the point of view of removal by the surgeon in diseased conditions, it was important to remember its relation to the nasal septum, and, further, that it did not extend downwards so far as it was usually represented. Professor Symington discussed the question of enlargement of the pharyngeal tonsil, and expressed the view that rarely did it interfere with nasal breathing or produce deafness. In such cases the hypertrophy involved the whole of the mucous membrane of the naso-pharynx, and not simply the pharyngeal tonsil. Moreover, he believed that normally the tonsil atrophied after 9 or 10 years of age, though it might persist into adult life. The discussion was continued by Professor Elliot Smith, Professor Fawcett, Professor Keith, and Mr. P. T. Crymble; and afterwards Professor Symington replied. Mr. J. E. S. Frazer gave a paper describing the mode of development of the Eustachian tube and the tympanum. This paper was illustrated by a large number of models made by the wax-plate method of Born, and also by means of diagrams. Mr. Frazer found that the Eustachian tube and tympanum were formed out of the "Eustachian recess," a lateral extension of the pharyngeal cavity, with which the first and second pouches were connected. The fossa of Rosenmüller was a secondary depression unconnected with the second pouch. Mr. Frazer also sketched the development of the naso-pharynx and the palate. Professor A. C. Geddes discussed the inter-relation of the size of the antrum of Highmore and the position of the permanent teeth. From a consideration of two eunuchoid skulls, in one of which the expansion of the antrum was very small, and in the other altogether absent, he had come to the conclusion that the moving of the teeth into position was not dependent on the development of the antrum of Highmore, except possibly the two posterior molars. Professor Geddes also demonstrated six interesting abnormalities from the dissecting room. Dr. William Wright gave a demonstration on the anatomy of the trigonum vesicae. Among the interesting points raised was the continuity of the fibro-muscular tissue of the prostate with the fibres of the trigonum vesicae and with those of the detrusor. After removal of the prostate the continuity was destroyed, and the bladder was emptied by abdominal pressure. Professor A. Robinson, Professor Peter Thompson, Mr. P. T. Crymble and others took part in the discussion which followed, after which the Section adjourned.

SECTION OF BACTERIOLOGY.

THE President of the Section, Dr. C. J. Martin, having addressed a few words of welcome to those present, called on Dr. A. C. Houston to open the discustion on recently acquired knowledge concerning the bionomics of pathogenic organisms, and its bearing on the spread of disease. The speaker dealt with the relative importance of (*a*) the passive accidental transmitters and (*b*) the living manufactories of disease, and the importance of trying to bridge over the gap which links together in some mysterious fashion successive epidemics. In an interesting and detailed account of general views and of the author's own experience, particularly with the bacteriological examination of water, he came to the conclusion that there was a danger of exaggerating the influence of the merely passive transmitters and of under-estimating that of the living carriers of disease germs. Professor Lentz, of the Institut für Infektionskrankheiten, Berlin, followed with a lucid account of the typhoid campaign which has been in operation in south-west Germany since 1903, and the marked effect that the combined efforts of epidemiologists and bacteriologists have had in lowering the incidence of typhoid fever in that district. A great part of his paper was taken up with the importance of the carrier question. Dr. Savage dealt with the question of bovine streptococcus carriers. He emphasized the biological differentiation of the two types (bovine and human). As a rule the streptococci of human origin did not persist long in bovines, while bovine streptococci when inoculated upon the human throat rapidly died out. Dr. Savage found that while the bovine streptococci were not generally pathogenic to man, it was quite possible that pathogenic human streptococci might infect the teats of cows, owing to the filthy habits of certain milkers, the cows thus becoming passive transmitters of human streptococci. The question of dysentery carriers, paratyphoid carriers, diphtheria carriers, was fully dealt with by Drs. Macalister and Menzies, Drs. Bainbridge and O'Brien, and Dr. Arkwright respectively. Dr. Petrie also gave a lucid account of the mode of transmission of *B. pestis*. Further speakers were Professor McWeeney (Dublin), and Dr. Buchanan (Glasgow), who also discussed typhoid and meningococcus carriers. Dr. Houston, in summing up the discussion, commented on the practical unanimity of opinion with regard to the thesis put forward in his opening paper.

SECTION OF DERMATOLOGY.

THE discussion on modern methods in the diagnosis and treatment of syphilis was opened by Dr. Feibes (of Aachen), who summarized the present position and deprecated the action of newspapers publishing all sorts of premature statements with regard to new drugs in the treatment of syphilis, drugs that were still on their trial. Mr. Ernest Lane insisted on the importance of dealing with cases on their merits, and advocated no single method of treatment to the exclusion of others. Dr. Wild (of Manchester) touched specially on the later manifestations of syphilis, and considered that treatment by the mouth was sufficient. Dr. George Pernet emphasized the fact that syphilis as a subject was not properly taught in this country. Every case should be taken on its individual merits as regards treatment. He did not consider that pills were an efficient treatment. Intramuscular injections had certainly given good results and were extremely valuable. Mr. McDonagh read some remarks on his experience of Wassermann's reaction. Dr. Stopford Taylor (of Glasgow) was in favour of intramuscular injections of grey oil, and pointed out that syphilis was badly taught in this country. Dr. Tomkinson (of Glasgow) favoured soluble injections, and Dr. Griffith considered the pill method was a good one. Dr. Eddowes was of opinion that local treatment of syphilides by a mercurial ointment was useful. Dr. Douglas Heath (of Birmingham) denied that inunction treatment was valuable in bad cases of syphilis. Dr. Feibes, in reply, remarked that pill treatment was inefficient.

SECTION OF DISEASES OF CHILDREN.

THE President opened the proceedings with a few words on the growing importance of children's diseases, and outlined the work lying before the Section. Dr. J. A. Coutts then opened the discussion on the diagnosis and treatment of non-tuberculous joint diseases in children. He dwelt on the elusive character of rheumatic arthritis in children, and the need for most careful scrutiny of the past history of any patient suspected of rheumatism; he deprecated as unworkable the classification of such cases as acute, subacute, or chronic, and was inclined to regard as non-rheumatic any arthritis in a child that did not yield to moderate doses of salicylate. He noted the occasional occurrence of chronic arthritis—probably a Charcot's joint—in anterior poliomyelitis; and in the arthritis of purpura advised the use of polyvalent antistreptococcal serum given by the mouth. Remarking that rheumatoid arthritis is fortunately rare in children, he briefly considered the joint troubles that occur in Still's disease, in congenital syphilis, in pneumococcal infections, and in enteric and scarlet fever. Mr. E. M. Corner discussed the surgical aspects of the matter, laying stress on the streptococcal and staphylococcal joint infections that may so closely resemble tuberculosis as to deserve the name "pseudo-tuberculous." He also noted that secondary coccal infections may occur in tuberculous joints, and believed such infections to be not infrequent. He had hopes that vaccine-therapy would do something for these joint disorders, and render surgical interference unnecessary. Mr. J. Keogh Murphy quoted cases of pneumococcal arthritis and periarthritis, also drawing attention to the rarity of gonococcal arthritis in the children of this country. Mr. H. Tyrrell Gray divided cases of pneumococcal arthritis into three classes, and could not agree with the statement that mixed infection is fairly common in tuberculosis of the joints. Dr. J. McCaw (Belfast) emphasized the importance of minute inquiry into the histories of children suspected of rheumatism; children with growing pains, he said, should always be treated as if they had rheumatism. Mr. R. C. Elmslie believed that many cases labelled "chronic rheumatism" were in reality instances of painless tuberculosis; he deprecated early surgical interference in patients with tuberculous joints, and found it hard to credit that the diseased joints sometimes met with in anterior poliomyelitis could be instances of Charcot's joints. Mr. W. Essex Wynter noted the good effects of camphor in certain cases of pneumococcal arthritis. Dr. M. Parry Jones (Derby) referred to the slightness of the symptoms evinced by many rheumatic children, and to the danger of producing dilatation of the heart by giving salicylate in excessive doses. Dr. Coutts and Mr. E. M. Corner replied briefly to various questions raised. About seventy members attended the discussion. The next business was a paper by Dr. H. J. Gauvain on the conservative treatment of tuberculous cripples, in which he outlined the methods employed at the Cripples' Home and College at Alton, and emphasized the importance of training the nurses to educate, as well as to nurse, the patients. Lantern slides were shown to illustrate the various points of the paper. Mr. W. B. Parsons congratulated Dr. Gauvain on the success with which the 70-years old principles of treatment advocated by Chance were being applied at Alton. The morning's work ended with a paper on the diagnosis of affections about the hip-joint in children, by Mr. W. B. Parsons, in which it was shown how closely prevertebral inflammation can simulate hip disease. He laid great stress on the importance of local treatment, of whatever kind may be necessary, in dealing with tuberculous arthritis; the more so because in these days the tendency was to give general treatment only, with the idea of reinforcing Nature's methods of healing.

SECTION OF GYNAECOLOGY AND OBSTETRICS.

ON the assembling of this Section, the President, Mrs. Mary A. D. Scharlieb, after a few remarks on the order of debate, welcomed the foreign visitors, Professor D. Döderlein, of Munich, and Professors S. Gottschalk and W. Nagel, of Berlin, and alluded to the unfortunate absence of Professor von Herff, of Basle, owing to the illness of his son. A discussion on dysmenorrhoea was then opened by Dr. Herman, who defined the disease as spasms of uterine colic occurring at menstruation, the pains, though perhaps lasting but a short time, being so severe as sometimes to cause vomiting or even fainting. The term was sometimes loosely applied to any kind of pain occurring during menstruation, but this was a mistake, nor could he admit such forms as obstructive or membranous dysmenorrhoea; membranes were in some instances expelled from the uterus every month without any pain. As regards the cause of dysmenorrhoea, we possessed, he said, no criteria. The condition was most commonly found in neurotic people. Its spontaneous cure was very rare and its sole natural cure was pregnancy. Every case could be cured, but the remedy might be worse than the disease. To relieve pain morphine might be given, at the risk of establishing a morphine habit. The tar products, phenacetin and others, did less harm, but were not always successful. Good food, rest, and fresh air might do much good, and, of all drugs, guaiacum seemed the most reliable. Dilatation of the cervix was undoubtedly beneficial in many cases, and was best effected with metal bougies, up to the size of No. 14, but not larger. He condemned the use of instruments for rapid dilatation, and disliked tents, but, if such were used, two slender ones were better than one thick one. For a radical cure, ovariotomy might be performed, especially in women having to maintain themselves and losing their situations owing to being disabled every month. Hysterectomy was also at their disposal. Professor Gottschalk made special mention of the nasal treatment of dysmenorrhoea, introduced by Fliess, and to intermediate pains (*Mittelschmerz*), true and false, the former due to intermediate irritation, the latter to the commencement of the menstrual wave. Professor Nagel also spoke on *Mittelschmerz*. Dr. Curtis Webb, who had had much satisfaction in the use of guaiacum and hot alcoholic abdominal compresses, agreed that true dysmenorrhoea depended on uterine spasm, and held that, consequently, the benefit of electrical treatment was to be logically expected and had been practically demonstrated. Dr. R. J. Johnstone, of Belfast, had found it necessary, not

merely to dilate the cervix, but to lacerate or divide the muscular tissue, and even in some cases to perform Dudley's operation. Dr. Inglis Parsons, after dilating the cervix, introduced a glass stem for fourteen days, the patient remaining in bed. Dr. Frederick Edge attributed much of the dysmenorrhoea of English girls to their being badly fed between the ages of 9 and 17. Dr. Blair Bell said there were many forms, some due to structural congenital conditions, others to acquired conditions; with others he strongly insisted on hysterectomy rather than ovariotomy for radical cure. Professor Murdoch Cameron and Dr. Frances Ivens also spoke, and after a few remarks from the President (Mrs. Scharlieb), Dr. Herman replied. Professor Döderlein then read a paper on the origin and prevention of puerperal fever, in which he brought conclusive proof that it is better for parturient women not to be submitted to vaginal irrigation, and insisted on the use of india-rubber gloves in making the vaginal examinations that are clinically necessary. This paper gave rise to a very spirited discussion by Dr. Ballantyne, Dr. Purslow, Dr. Herman, Dr. Munro Kerr, Dr. Kirkby Gomes, Dr. Blair Bell, Dr. Frederick Edge, Dr. Hastings Tweedy, Dr. Thomas Wilson, and the President, mostly in entire accordance with Professor Döderlein. Dr. Herman, however, held that as good results had been obtained without as with gloves; and Mrs. Scharlieb said the hands should be as carefully disinfected as if gloves were not about to be used, while the gloves should be as carefully treated and worn as if the hands were infected. Dr. John Campbell (Belfast) then read an interesting paper on air embolism during labour, which was followed by one on rupture of the uterus by Dr. Munro Kerr (Glasgow), and one by Dr. James Young (Edinburgh) on the structure of the stroma of the uterine mucous membrane and its bearing on menstrual changes, which was illustrated by many photomicrographs and beautiful coloured drawings.

SECTION OF LARYNGOLOGY.

MR. TILLEY, President of the Laryngological Section, opened its proceedings at 10 a.m. with a few remarks on the growth of knowledge in this branch of medicine. He feelingly referred to the loss that medicine had sustained by the death of the late King. He also expressed the regret felt at the death of Cresswell Baber, who had been the personal friend of many of those present. He offered a hearty welcome to all visitors, and spoke in eulogistic terms of Professor von Eicken. He spoke of the increased knowledge of the accessory sinuses of the nose and the improved methods of operating upon the septum which had been developed of late, together with other advances — for example, improvement of facial deformities as a result of paraffin injections, which, however, had not been as successful as was hoped. He thought that the recognition of persistent hoarseness as an early symptom in laryngeal cancer was a matter for congratulation. Though it might seem that the field for investigation was being limited by the great advances that had been made in recent years, there was yet a large field for inquiry. Immunity offered a wide scope, as did also the portals of infection. He concluded his address with the following quotations that "the knowledge of to-day may prove to be the foolishness of to-morrow." "to travel hopefully is better than to arrive," and "the true success is to labour." Dr. von Eicken then read his paper on the technique of the direct examination of the oesophagus and lower air passages, before a larger assembly than has been seen at these meetings for some years. It was a paper full of interest and was amplified by an exhibition and description of the various instruments he used in this relationship. He spoke of the different methods of illumination, dealt with the methods of fixation of the lamp, and advocated the latest type of Kirstein mirror. The importance of passing all instruments during illumination, and with the aid of the eye, was insisted upon, as also the value of a thorough knowledge of the anatomy of the bronchi, trachea, and surrounding parts. He discussed the advantages of the lateral, dorsal, and sitting postures, and the various difficulties and dangers met with in different pathological conditions. He strongly reprobated the use of force in any of the manipulations. With reference to the use of anaesthetics, he preferred chloroform to ether, using at the same time a local anaesthetic. The paper was completed by an exhibition and demonstration of the uses of the various instruments referred to. Dr. Paterson (Cardiff) dealt rather with oesophageal illumination, mentioning its priority over tracheal from the point of view of time. Dr. W. Hill then gave a short paper dealing with his special modifications of instruments, which he also exhibited, and which deserve considerable attention as they mark an advance over their predecessors in many respects. The tubes are specially modified so as to give increased manipulative power to the operator. Many of those present joined in the discussion, and gave their personal experiences upon the subject. Drs. von Eicken, Paterson, and Hill replied to questions raised, and the proceedings terminated with the reading of a paper by Mr. J. S. Fraser on congenital atresia of the choanae.

SECTION OF MEDICAL SOCIOLOGY.

THE new Section on Medical Sociology deserved a better beginning than it received, in view of the vast importance to the profession of the subjects down for discussion, the careful preparation of the programme, and the fact that the inaugural meeting was postponed from last year to this. The session was held in the old College of Science, and possibly many persons were prevented from attending by the difficulty of finding the place. Dr. Macdonald, the President, opened the proceedings at 10.30 a.m., with a very small audience. After briefly relating the history of the development of the Section, he stated that it might seem that Medical Sociology did not come, properly speaking, within the purview of the Association, whose function was the furtherance of medicine and the allied sciences. The subject of the Section, however, while not actually an allied science of medicine, was of considerable importance to the medical profession, and it was right that it should be possible to discuss it in a separate Section. He would have liked to have defined the word "sociology," and for this purpose appealed to a member of the Sociological Society, but without success. A definition had been suggested, namely, that medical sociology is a science dealing with all those subjects which would be discussed in the Section. Politics, however, would be precluded. The subject of the economic basis of hospital management was opened by Professor Benjamin Moore of Liverpool. In his speech and in those that followed, certain points were uniformly agreed upon, but others formed marked bones of contention. Briefly epitomized, the Moore-Burdett scheme is that charity is unworkable as an efficient basis of administration of hospitals; that the patient should be admitted if the treatment can be better applied in the hospital than in the home; that the patient should be forced to insure against sickness, and the insurance company should contribute to the hospital when the patient cannot afford to pay himself; that the staff should not give gratuitous service; that the administration should be largely medical; and, lastly, that there should be uniform co-ordination of all the elements of hospital life. Professor Moore deprecated the idea that modern hospitals are charitable institutions. They should be regarded as places where disease is studied and advances in medicine are made; where the embryo physician and surgeon are developed; and where steps are taken to improve the public health. He, in common with several subsequent speakers attacked the present principles of hospital organization. He believed that there should be grades in the service of the medical staff, and that a house-surgeon should be able, by promotion, to work his way through all the greater hospital appointments.

Insurance was coming, and with it, he believed, the municipalization of hospitals. Sir Henry Burdett followed in a different tone, but more or less to the same effect. The present system, he believed, was bad for the hospitals and worse for the profession—to the extent of £60,000 a year. It seemed to him that the taking over of the hospitals by the Government was almost an accomplished fact. Hospital abuse and bad administration were dealt with in no uncertain terms, and the speaker contrived to drive his arguments home in an effective manner. Dr. Heron followed with a criticism on the Hon. Sydney Holland, who was said to have stated in public that he was tired of hearing of the philanthropic work of doctors. Dr. MacIntosh believed in a uniform system, and drew lessons from the practice of fever hospitals, which nearly every one applied to. He wished the reform to move more slowly than the others appeared to desire. Dr. Luckham spoke of the details of administration, while Dr. Morrison dealt with principles, or, as he termed it, the radical question. His remarks were more or less moderate acceptances of the scheme of reform put forward by Professor Moore. Mr. Kershaw, the Secretary of the Central London Throat and Ear Hospital, speaking from the lay point of view, wished to correct the assumption that abuse was rampant. He set forth his experience in percentages. Professor Saundby advocated a modified ticket system for admission into hospital, and gave amusing instances of glaring abuse. He objected strongly to the demand that every person should have a right to go to the hospital. Dr. Ker referred to the Bolingbroke Hospital, and Dr. Buist expressed his belief that the charitable aspect of the question must be gradually curtailed. Dr. Major Greenwood objected to the payment of the medical staff of hospitals.

SECTION OF MEDICINE.

AFTER some opening remarks by Dr. R. W. Philip, President of the Section, Professor D. L. Edsall, of Philadelphia, opened a discussion on the pathogenesis, prophylaxis, and treatment of acidosis. While there was an important distinction between acidosis and acid intoxication, there was, from the clinical as well as from the pathological standpoint, another equally important distinction between the forms of acidosis, sometimes severe and sometimes mild, that were due to lack of carbohydrates or inability to utilize them, as in diabetes, and those forms which were incidental to severe disease which was most commonly situated in the liver. Even in the latter forms, however, diet at times played an important part in treatment as to alkalies, probably less through checking the direct effects of acidosis than through controlling secondary effects, perhaps an autolysis. While it was not certain that acid intoxication was the prime cause of the violent toxic symptoms in diabetes, it was highly probable that it was the main cause, as well as in the occasional cases of coma of the same type in non-diabetic persons. The manner in which the severe symptoms were produced was not clear. The relation of the loss of inorganic salts to the production of symptoms, and the possible relation of the same salts to the production of acidosis, needed further study. It was not improbable that these salts had some relation to the symptoms in the earlier course of diabetes before severe toxic symptoms came on. It seemed probable that the addition of other bases besides sodium in the treatment of acid intoxication might help better than sodium alone in postponing a fatal issue. Alcohol had a marked influence in controlling acidosis, and should be administered in generous quantities; glycerine-aldehyde was another substance having a controlling effect, and it, unlike alcohol, had no toxic influence. The more a patient obtained the power of protecting himself in regard to carbohydrates the greater was the power he had of avoiding acid intoxication. Dr. E. I. Spriggs thought the distinction between different forms of acidosis and between those which showed obvious degenerative changes in the liver and those which did not unimportant. He referred to observations made several years ago by Dr. Pembrey, Dr. Beddard, and himself, especially as showing that acidosis might be produced by excess of carbohydrates or by starvation, or even by a too rapid diminution of carbohydrates. To prevent acidosis the patient should have precisely the amount of carbohydrates that he could assimilate. The chief treatment was by sodium bicarbonate, but that was only palliative. Dr. Langdon Brown held that starvation was the chief cause of acidosis, especially in regard to carbohydrates, but it might be due to oxygen starvation. He looked upon oxybutyric acid as an evidence of severe tissue destruction rather than as a cause of the acidosis. In prophylaxis it might be found that certain carbohydrates could be tolerated more easily than others. Potassium citrate was a valuable adjunct to the sodium bicarbonate in treatment. Dr. A. P. Beddard discussed the effect of exercise on acidosis and to its treatment by alkalis. Dr. Leonard Guthrie discussed the question of post-anaesthetic intoxication, and said he thought all children the subjects of cyclical vomiting were potential victims. Dr. M. S. Pembrey said that acidosis was really a question of physiology, in which the law of excitation came into play. The sudden changes were the serious ones in its production. Dr. J. H. Ryffell alluded to the influence of severe exercise in producing acidosis, and thought lactic acid was the effective poison when so produced. Professor Edsall, in reply, said the failure of the administration of alkalis in many cases of acidosis was a strong argument used by the opponents of the view that the acid factor was the sole cause of acidosis. Dr. Leonard Hill gave a demonstration of improved methods of giving oxygen, with an account of the influence of air in treatment.

NAVY, ARMY, AND AMBULANCE SECTION.

THE work of the Navy, Army, and Ambulance Section commenced on Wednesday, July 27th, with the deliverance by the President of the Section, Colonel Andrew Clark, A.M.S.(T.F.), of an address of welcome. In the course of it he referred to the relation of the British Medical Association to the Services, saying that the Territorial Force, consisting as it did of civil members of the profession in special and general practice, came into more direct contact with the bulk of the members of the Association at home than did the members of the regular army. This served to a considerable extent to bind the Services to the Association at home. As the Association now extended all over the empire, its Oversea Branches, which were continually increasing in number, were much helped in carrying on the work of the Association, both professional and social, by the officers of the army and navy who were from time to time stationed abroad, and they were able to inform the executive of the requirements of various localities, which varied very much. One of the main reasons that determined the Association to seek a Royal Charter, giving more extended powers than those of a limited liability company, was to benefit the Oversea Branches. A Charter was not possible at present, but the speaker hoped and believed other means would be found to afford the facilities required. Of late years representatives of the Services had served on the Executive Council of the Association, and this had been the means of bringing the services and their requirements, as well as the Oversea Branches, into touch with the Association. The formation of the Territorial Force gave the opportunity of completely reorganizing the medical services of the Yeomanry and Volunteers, and of forming a medical corps capable of enabling the Force to be independent in its medical organization in case of mobilization, and Colonel Andrew Clark rightly claimed that representations made by the British Medical Association had helped to effect this result. Major C. G. Spencer read a paper on local and spinal analgesia in relation to active service. This was followed by a paper on hypodermic injections in "action," containing suggestions for simplifying their administration, by Fleet Surgeon A. G. Wildey. An interesting communication from Colonel P. Broome

Giles, dealing with the training of the Territorial Royal Army Medical Corps, was read by Major Arthur M. Connell, R.A.M.C.(T.), of Sheffield, one of the Honorary Secretaries of the Section. An important paper followed, which was read by Lieutenant-Colonel E. M. Wilson, R.A.M.C., on medical requirements in war for assisting the Royal Army Medical Corps on mobilization.

SECTION OF ODONTOLOGY.

MR. J. HOWARD MUMMERY, President of the Section, delivered a short opening address, special reference being made to the recent more intimate association of the dental with other branches of medicine, and the benefit accruing thereby, both to specialists and the medical profession generally, and the world at large. The special discussion on the prevention of dental caries was opened by Dr. Sim Wallace, who dealt with the effect of various foodstuffs, and referred particularly to the arrangement and selection of meals. The meals, he said, should be arranged in such a way that there would be in each a sufficiency of hard food to stimulate the pleasurable activity of efficient mastication, together with its excellent concomitant effects on gums, jaws, teeth, and alimentary canal generally, and should be terminated with foods of a detergent nature, so that sticky carbohydrates would be cleaned from the teeth. He gave diets suitable for meals which would not produce caries. Dr. Harry Campbell, Mr. Underwood, Dr. Wheatley, Mr. Maggs, Mr. Hopewell-Smith, and Dr. Sydney Davies joined in the discussion. Mr. A. S. Underwood followed, taking the influence of climate as his subject. He read a most interesting paper embodying the results of a careful examination of an extended series of skulls of various races and various epochs. He showed that cleanliness and uncleanliness did not suffice as a cause of dental disease or its converse. He concluded by stating that prevention of dental caries could be best attained by: (1) A return as far as possible to the simple life; (2) a return as far as possible to maternal breast-feeding; (3) a universal habit from early childhood of cleansing and rinsing the mouth after every meal, and especially at bedtime. Mr. Frederick Bennett, Mr. Dolamore, Dr. Harry Campbell, Mr. Maggs, Dr. Wheatley, Dr. Chowry Muthu, Mr. Howkins, Professor Elliot-Smith, and Dr. Sim Wallace took part in the discussion. In the discussion Dr. Harry Campbell estimated that in this country there must be 200,000,000 carious teeth, and much the same number of root abscesses and pyorrhoea abscesses. Mr. F. Bennett, Dr. Wheatley, and Mr. Kenneth Goadby took part in the discussion; and Mr. Sim Wallace replied. Dr. Hector Mackenzie discussed the care of the mouth during general disorders. He urged very strongly that an elementary knowledge of diseases of the teeth should be imparted to all medical students, and should be required of them when they presented themselves for the final examinations. He stated that dental caries was a preventable disease, and that it never arose without neglect of oral hygiene. He laid great stress on the neglect of oral hygiene during illness; as in case of fevers, "Read," he said, "the descriptions of these illnesses in the medical textbooks, and you find sordes filth from neglect which have been allowed to collect on teeth and lips mentioned as a usual symptom."

SECTION OF OPHTHALMOLOGY.

In his opening address, the President, Mr. Chas. Higgens, sketched the progress of ophthalmology as he had seen it during his experience of forty years. In some things they had advanced greatly; in others they had made no real advance so far as treatment was concerned. In the second of these classes he would put trachoma, glaucoma, and uveal inflammation. Of trachoma, they knew more of its histology and something of its pathology, and they had dropped its old name; but in treatment they had made no advance. In glaucoma much of interest had been discovered as regards its pathology, but of its treatment no more could be said than that a "bad" iridectomy—that is, one with a leaking scar—was the most desirable of all results. In other branches of treatment there had been real advantage gained in his time. The treatment of squint had been revolutionized by the extensive use of glasses. The correction of ametropia, the prescription of glasses, and the making of lenses had not only been simplified, but made certain and accurate. He could not say that great advances in instruments were marked, except perhaps it were in the introduction of Haab's giant magnet, but this was more for hospital than private practice. One matter of note was the great increase in the number of ophthalmic surgeons. In his early days they were a handful; now they counted hundreds. He hoped that competition would not tend to demoralize them, but that they would always strive after a high ideal. Lastly, he referred to the British Medical Association and its work; he desired greatly that its operations should be emphasized by an increase in its trade-union aspect, more power to deal with abuse both within and without the profession. Dr. G. A. Berry (Edinburgh) opened the discussion on the future of ocular therapeutics. Advances, he said, were possible in two ways: (1) By experimental treatment based on clinical observation. (2) On indications derived from new pathological discoveries. Of the two, the clinical side of advance had been the more fruitful hitherto, notwithstanding the fact that our knowledge of pathology had advanced out of all proportion to our knowledge of therapy. Part of this difficulty arose from the great difficulty of applying theoretical knowledge in daily practice. Of treatment he recognized two forms: (1) local, (2) general. Each form had had particular vogues in remote times and places. Of the two, the former presented the great continuity of adherence; the latter often fell into disrepute owing to excessive usage by enthusiasts. Dr. J. W. H. Eyre developed the discussion from the side of bacteriology. The first point he wished to emphasize was the necessity for accurate diagnosis if any advantage from bacterial treatment was to accrue. Nature was careful in her reparative processes and not prodigal; an antibody prepared for one micro-organism had no inhibitory effect on another. Serumtherapy and vaccine-therapy constituted the two modes of attack. Of the former, antidiphtheritic serum had alone proved of real use in eye work. Vaccine-therapy showed great promise; tuberculin T.R., antistreptococcic and antistaphylococcic, had each proved of the greatest value when properly used, and in cases where specific diagnosis was made. He emphasized the necessity for the ophthalmic surgeon and bacteriologist working together if the best results were to be obtained. Continuing the discussion, three papers on new modes of treatment were read. Mr. Arnold Lawson and Dr. Mackenzie Davidson (London) read a paper on radium-therapy in ophthalmology. The method of application was described, and some indications gathered from their experiences were given in regard to dose, length of exposure, and frequency of sittings. The immediate and remote effects of exposing the eye to radium were discussed and the results of treatment detailed. The report was of an encouraging nature, indicating that cornual ulcers in particular are very susceptible to this method. It seems also a certain cure for "spring catarrh." A tabulated report of cases treated was presented. Dr. H. M. Traquair (Edinburgh) read a paper on the treatment of purulent keratitis by ionotophoresis. This method depended upon the electrical deposit of zinc into the tissues to be treated. He had confined his work to hypopyon ulcers, of which twenty-one had been treated, some with marked success. He showed the apparatus used. Mr. Bishop Harman and Dr. E. R. Morton (London) read a paper on the use of carbon dioxide snow in eye work. The usage of this form of caustic had been proved to have the highest advantage in capillary naevi of the skin; a single application for forty seconds was enough to effect a cure. Recently, papilloma of the lids and rodent ulcer had been subjected to treatment with results that must be seen to be believed. A single application of the snow

to the abnormal surface for forty seconds caused complete disappearance of the growths. Its use had been experimented upon in trachoma; four cases were under treatment. Brief and repeated applications—fifteen seconds gradually increased to thirty seconds, once a week—were used. The method was almost painless, and with all reserve they were inclined to think the snow had a future before it for the relief of this chronic disease. Dr. A. MacGillivray (Dundee) said he felt that some of the opening papers had been unduly pessimistic: if they had not attained to all their expectations, they had made some sure advances. Dr. R. A. Reeve (Toronto) spoke of the use of deonine; it had been discredited because wrongly used; the powder itself should be applied to the lids, and not a solution. Dr. G. S. Ryerson (Toronto) commented on the use of radium in epithelioma of the orbit. Mr. Hill Griffith (Manchester) cited the usefulness of tuberculin in tubercle of the conjunctiva. Mr. A. W. Ormond (London) confirmed this view in an experience of four cases of grave tuberculous periostitis. Mr. Leslie Paton (London) cited as an advance his method of reduction of detached retina; it was not only necessary to relieve the detachment but also to secure the retina, and this the cautery would do. Dr. Montague Harston (Hong Kong), Major Gidney, I.M.S., and Major Fink, I.M.S., continued the discussion. Dr. Berry and Dr. E. R. Morton replied.

SECTION OF OTOLOGY.

THE proceedings in this Section were opened by the President, Dr. Edward Law, who gave a brief address, in the course of which he touched upon the importance of more attention being paid to the condition of the nose and the naso-pharynx to reach the source of origin of deafness and ear disease. He also emphasized the importance of the early treatment of school children as at present being carried out by the London County Council. The omission in the valuable report of Dr. James Kerr of any mention of "aural tuberculosis in children" fully justified, he considered, the action of the officers in selecting "aural tuberculosis in children" as a fit and proper subject for one of the discussions. This discussion was opened by Dr. William Milligan (Manchester). Dr. Milligan dealt with the frequency of aural tuberculosis in children, and discussed the usual routes of infection. He insisted upon the importance of recognizing the disease as of primary origin in the middle-ear cleft in a large proportion of cases. The main symptoms of the disease were considered, and the various methods of establishing a definite diagnosis were described. Suggestions were made for dealing with cases of aural tuberculosis in school children with a view of preventing dissemination of the disease. Mr. R. Lake (London) stated that in his own hospital experience the disease was very rare indeed. He advocated absolute eradication by operative measures. Mr. F. H. Westmacott (Manchester) also criticized the remarks of Dr. Milligan as regards the frequency of the disease. Mr. Westmacott had had exceptional opportunities in the Children's Hospital in Manchester of investigating the matter, and of 1,500 children examined, only 2 per cent. had aural tuberculosis. Mr. Sidney Scott (London) referred to specimens in the medical museum of the Association which had a bearing upon the discussion. Dr. R. Bárány (Vienna) cited a case in which a large cholesteatoma was associated with aural tuberculosis; he also advocated radical treatment by operation. Dr. Dundas Grant (London) mentioned methyl violet as an antiseptic that might be tried in the disease. Dr. Jobson Horne (London) considered the disease had a definite morbid anatomy, that its origin was in the mastoid and petrous portion of the ear, and that it was essentially a bone disease in children, and in early life was commonly primary in origin. Dr. Horne suggested radiography as an aid to diagnosis in the earliest stages of deposition of tubercle in the bone. Mr. Mark Hovell (London) supported a rigid inspection of the milk supply. Mr. Hunter Tod (London) attributed the appearances of the tympanic membrane to a double infection. Mr. C. E. West (London) criticized Dr. Milligan's statistics as excessive. Dr. Edward Law thanked Dr. Milligan for his paper; and the latter in his reply stated that he knew that his statistics would be challenged. Dr. H. S. Birkett (Montreal) gave a demonstration illustrated by radiograms of the mastoid process.

SECTION OF PATHOLOGY.

THIS Section met under the Presidency of Mr. Shattock who, in his introductory remarks, pointed out that the main principle of these meetings was the interest of the general practitioner. He dwelt on the part the practitioner himself might play in recording observations, and hoped that he might in future be encouraged to contribute to the proceedings, suggesting certain subjects that might come under his ken, for example, histories, *quâ* alcohol, of people over 80, cancer and cancer houses, and, of great import, the construction of medical pedigrees. He touched upon his work with Dr. Dudgeon on the fatal effects of drying on the cancer cell, a fact which reduces the possibility of the air-borne infection of cancer. Dr. Mott then described the histological changes occurring in the nervous system in certain cases of chronic alcoholism, illustrating his remarks with lantern slides. He discussed the varying susceptibility to alcohol and idiosyncrasies, and pointed out that the effects that could be definitely ascribed to alcohol on the nervous system were not often seen, even in large asylums. Photographs of chronic alcoholics supported his view (corroborating that of Dr. Branthwaite) that many were congenitally defective. Cirrhosis of liver was touched upon, as he had found that advanced cirrhosis with ascites was very rare in alcoholics. Alcohol might, he said, be taken for many years in excess in certain individuals without producing insanity. He discussed heredity in alcoholism, and pointed out that the combination of insanity with alcohol appeared to be certainly the worst combination and produced the worst stock. The excess of rural insanity over urban he ascribed to the migration of the better stock from the country. Alcohol was, he said, an important factor in crime production—it killed off the degenerates, but led to fertility because of carelessness; this, however, was counteracted by the sterilizing effects of venereal diseases. He then gave illustrations of the mental effects of alcohol, and laid down the doctrine that often the effects in such conditions as puerperal mania were due to alcohol associated with microbic affections, this from histological and bacteriological examinations of the pelvic tissues. The paper concluded with a graphic account of the histological changes found in alcoholics, the slides being contrasted with others from normal brain tissues. Sir Clifford Allbutt, in discussing this paper, expressed the view that the immense body of writings on this subject had served its purpose, and should now be reduced to scientific order. Drs. Mackie Whyte, MacVicar (Dundee), Pasmore (Croydon), and others having commented on the paper, Dr. Mott briefly replied. Dr. Willcox and Dr. Collingwood (Dublin) then demonstrated a method of administering oxygen with alcohol vapour, by the use of which they had produced much better results than with oxygen alone, the mixture having an increased marked stimulating effect on the circulatory system. Physiological evidence supported the therapeutic results, and Dr. Willcox was justified in pointing out that whilst realizing the dangers of alcohol, as exemplified in Dr. Mott's paper, it was necessary not to lose sight of the good effects it may have under certain conditions in small quantities—for example, in pneumonia with cardiac failure, in shock after operations, especially abdominal, etc. It had been tried with success in St. Mary's Hospital for a long time. Dr. Ch. Achard (Paris), after being introduced by the President, then read a brief note on the investigation of dead leucocytes by the

neutral red test. He had found that living leucocytes remained uncoloured or contained red-stained intra-protoplasmic granules or vacuoles, but dead leucocytes showed a red-brown nucleus but no cytoplasmic staining.

SECTION OF PHARMACOLOGY AND THERAPEUTICS.

THE Section met at 10 a.m. on Wednesday, July 27th, in the Basement of the Imperial College of Science. Professor A. R. Cushny, F.R.S., occupied the chair. Without any opening address, he called upon Dr. O. F. F. Grünbaum (London) to open the discussion upon treatment with lactic acid organisms. Dr. Grünbaum said that the Section must do its best to forget the numerous untruths which were circulated in the press by those interested in the manufacture of lactic acid preparations. He proposed to direct the discussion into three channels: (1) The theory of the action of the lactic acid bacilli. (2) The method of administration. (3) The diseases likely to benefit by the administration. The great advantage of the lactic acid bacillus over other intestinal antiseptics was that it formed lactic acid where it was wanted. Antiseptics given by the mouth were little likely to be effective in the intestines. It was well to select the *Bacillus bulgaricus* as the organism which was to be relied upon to produce the lactic acid. Lactic-acid-forming streptococci were less active and could not be distinguished by the microscope from other streptococci which were accidental contaminations. During the first four days of treatment he put his patients upon a special diet, mainly carbohydrate with a fair quantity of malt extract. The milk should be given at the stage when it had just curdled, and a pint taken daily in three doses. He had met with no unfortunate results. He had used it in mucous colitis, in uraemia, in diabetes, and in all forms of imaginary illness with great benefit. Professor Tanner Hewlett (London) did not regard all the named varieties of lactic-acid-forming organisms as distinct species. The variations were inconstant and insufficient to base a differentiation upon. While the majority of sugars were attacked by the *Bacillus bulgaricus*, saccharose and maltose were not attacked. It would, therefore, appear useless to add cane sugar to the diet of those taking soured milk in the hope of increasing the formation of lactic acid. The *B. bulgaricus* did not attack fats. The lactic-acid-producing streptococci could not replace the *B. bulgaricus*. They aided its action only by producing an acid environment. A better mixed and more uniform curd resulted when the streptococci accompanied the *B. bulgaricus*. If inoculation from soured milk to fresh milk were carried on from day to day, the streptococci tended to outgrow the bacillus. Whey was an excellent medium for the growth of the *B. bulgaricus*, and could be used where the nutritive and fattening qualities of the milk were not wanted. Tablets, as a rule, were inefficient "starters" for preparing soured milk, and with them the production of lactic acid was small. Dr. Alexander Bryce (Manchester) urged that two marked disadvantages of the soured milk treatment were that constipation frequently resulted, and that acid dyspepsia was produced, or at any rate aggravated, if present. He believed that the lactic acid was apt to produce rheumatic pains, such as sciatica, lumbago, muscular rheumatism, and even effusion into a joint. Of this he had had some personal experience. Professor Vaughan Harley (London) detailed experimental chemical work which had convinced him that lactic bacilli taken by the mouth were successful in reducing alimentary putrefaction. After a course of soured milk the faeces lost their alkalinity, and no longer gave Schmidt's fermentation test. The indican and the ethereal sulphates in the urine were reduced in amount, although these substances were normally present in such small amounts as to render conclusions based on quantitative estimation uncertain. Professor Sahli (Berne), speaking in German, said that he had had good results in conditions of an acidosis—in pernicious anaemia for example—and in typhoid fever. Bacteriological differences he did not regard as essential. The good effects were in part due to the lactic acid, however formed. Dr. Hertz's (London) experience was that so far from always producing constipation, lactic acid organisms were capable of producing severe diarrhoea. Many patients claimed that their constipation had been benefited by soured milk. In infective colitis the treatment was very effective, and in cases under his care he had had demonstrated the disappearance of the pathological organisms from the faeces. Such bacteriological control, he thought, was necessary. Dr. Robert Hutchison (London), Professor Bradbury (Cambridge), Dr. F. T. Bond (Gloucester), Mr. C. Revis (London), Dr. Johnstone (Bolton) also discussed the paper, and Professor Hewlett replied.

SECTION OF PHYSIOLOGY.

THE meeting of this Section was opened by some introductory remarks by the President, Professor W. H. Thompson (Dublin), in which he referred to the progress made in physiology since the Association last met in London. He went on to speak of the teaching of science in secondary schools, and the need of practical instruction. Lady Aberdeen's movement—the Women's National Health Association—in Ireland had, in his opinion, done a great deal of good. He then spoke of the special subjects for discussion in the Section, referring particularly to the necessity of drawing up standards for protein, carbohydrate, and fat intake. Lieutenant-Colonel Melville read a paper on the dietary standards for soldiers during hard work. In the experiments which he carried out two different diets were used, each for six days. The diet of the first week was made up as follows: Protein, 190 grams; carbohydrate, 510 grams; and fat, 58 grams; and that of the second week: Protein, 145 grams; carbohydrate, 450 grams; fat, 110 grams. The effect of the work on the soldiers on these diets was at first a steady rise, then a fall in body weight. The rise was explained either by retention of water or of protein. The loss of weight was, of course, due to the diet being insufficient for the work done. As regards the protein intake, he thought that 190 grams was ample, if not, indeed, generous, but that 145 grams, on the other hand, was to be regarded as the minimum. One point he emphasized was that the nature of the protein was much more important than the amount. As regards the carbohydrate, he thought the form in which it was given was of importance. It was found that the men could eat more bread and biscuit than the officers. The officers had a craving for sugar, which lasted for a week after the close of the experiment. He held that in the diet of the first week there was too little fat, and that even in the second week the supply could not be called lavish. Both officers and men had a craving for fat. The problem he set the Section at the conclusion of his paper was whether the balance of a diet for work should be made up of carbohydrate or of fat. A very interesting discussion followed, in which the question of the low and high protein intake raised by Chittenden was dealt with. The majority of the speakers were against the Chittenden standards, more particularly against the low calorie intake advocated by this worker.

SECTION OF PSYCHOLOGY AND NEUROLOGY.

THE great interest taken in the important matters to be discussed at the meetings of this Section was well shown by the large numbers who gathered at the opening meeting. Generally somewhat sparsely attended, to-day the room was packed. The address of the President, Dr. Theodore B. Hyslop, was listened to with the profound attention of all present. Dealing in the main with the connexion of brain and mind, the President handled this most difficult of all problems with masterly ability, not so much, however, with the intention of exposing the fundamental metaphysical conceptions on which any explanation must rest as of criticizing those conceptions from the point of view of

psychological medicine. The address was so broadly philosophic that it should be read, when published, in full. Dr. Savage opened a discussion on marriage and insanity. Prefacing his remarks by saying that the problem appeared at present beyond practical legislation, he said that the general opinion, lay as well as medical, was clearly against the marriage of all who had been insane. He, himself, however, considered that the general denial of matrimony was too broad and dogmatic, and that out of his own experience he could recall many cases where the individuals had undergone brief psychoses, had married and had children, without begetting insane offspring. The type of the insanity should be considered, and as absolute bars to matrimony he mentioned: Insanity with definite delusions or hallucinations; secondly, persons with a history of marked periodical mental disturbances, particularly occurring at the period of adolescence; thirdly, epilepsy with mental disorder—in fact, he doubted whether any person who had had epileptic attacks ought to marry. Incidentally he referred to the inadvisability of the subjects of syphilis or diabetes being permitted to marry, and stated as a matter on which there could be no doubt that no one should marry under the belief that this would act as a relief for either temporary mental disorder, hypochondria, or neurasthenia. Dr. Shuttleworth agreed with Dr. Savage that the time was not ripe for legislation, though he agreed that the marriage of the congenitally defective should be stopped. Dr. Shuttleworth was followed by Dr. Robert Jones, who, after discusssing the bearing of Mendelism upon the heredity of insanity, said that the supporters of Mendelian laws were too prone to take an exclusive cognizance of the parent, he himself denying the existence of gametic purity. Direct heredity, he maintained, was not so important as was generally presumed in the causation of insanity, other environmental factors, and particularly syphilis, alcohol, and tubercle being more important. Finally, he referred to recent statistics showing in persons not insane an heredity of insanity or epilepsy in as much as 55 per cent. Dr. Risien Russell, speaking from the point of view of the neurologist, discussed the marriage of epileptics, those with syphilitic disease of the central nervous system, and the impotent; and, whilst agreeing that as a general rule the epileptic should be advised against marriage, there were cases in which he should depart from that rule; so, also, he would distinguish between a tabetic, for example, and a case of syphilitic myelitis, as the latter, if properly treated, might marry without any resulting harm. Also he would distinguish between congenital or permanent and a transitory impotence. Many others, including Drs. Barker Smith, Shore, Fletcher Beach, Greenlees, Mills, Barnes, and Draper, the latter of whom pointed out that the preclusion of marriage might possibly have the effect of greatly increasing illegitimate unions, with still more disastrous effects than there were at present. A most interesting discussion was brought to a close by a resolution by Dr. Greenlees, seconded by Dr. A. Douglas, in favour of legislation prohibiting the marriage of those of unsound mind. This resolution, however, was withdrawn for further deliberation. Dr. Leonard Baugh then read an interesting paper on paranoidal symptoms at the female climacteric, in which he pointed out that the marked feature was the systematization of delusions, but which differed from true systematized delusional insanity in that the typical slow and steady evolution of the delusions was wanting. Dr. Baugh's paper was briefly discussed by Dr. R. H. Steen and the President.

SECTION OF RADIOLOGY AND MEDICAL ELECTRICITY.

AMONG the distinguished visitors at the opening of this Section were Lord and Lady Aberdeen, who remained during the greater part of the proceedings. Mr. J. Mackenzie Davidson (the President) devoted his address from the chair chiefly to the subject of radiumtherapy. He thought that radium had only a limited utility in the treatment of malignant diseases, but that it was potent in superficial conditions, while its value in external affections of the eyes and eyelids was such as to make it likely to take a high place in the ophthalmic therapeutics of the future. Sir J. J. Thomson, F.R.S. (Cambridge), then delivered an important address on radiation. Speaking as a physicist, and disclaiming any special medical knowledge, he said that the deleterious effects with *x* rays, of which there had been so many instances, and the curative effects also, were due really to the soft rays—rays which were most readily absorbed. When using Roentgen rays for purposes of exploration, it was important to get rid of these soft rays, but for purposes of curing disease it was evident that it was this absorption of energy which was required. Therefore, he thought they should develop any method that offered itself for producing and making effective these very soft rays. To produce them directly from a Roentgen tube was a matter of very great difficulty, but some recent experiments by a former pupil of his, Professor Barkla, suggested that secondary radiation under certain conditions would produce a definite softness of ray. When a piece of metal, or any substance, was struck by Roentgen rays, that substance gave out a special quality of ray. Iron, copper, or silver, whatever the quality of the rays that struck them, gave out a constant kind of Roentgen radiation. They had in this way a perfectly definite means of producing Roentgen rays of a specific type, and he asked whether it would be possible to use for medical purposes the radiation given out by these and other metals instead of trying to produce soft radiation by specially constructed Roentgen bulbs. A demonstration in radium therapeutics was then given by Drs. Dominici and Warden (Paris). Eight of their patients had even braved the Channel crossing in order to attest the reality of their cure. The cases in which radium had proved of great value in Dominici's hands included lymphadenoma of the parotid—a case which was considered inoperable by three surgeons—sarcoma of the mucous membrane of the upper jaw, epithelioma of the roof of the mouth, and malignant tumour of the testicle with metastatic growths in the pelvis and abdomen. Mr. R. J. Godlee and others took part in the discussion. Dr. Lewis Jones brought to the attention of the Section the value of the zinc ion in the arrest of a form of corneal ulceration which is known as Mooren's ulcer of the cornea. Zinc ions have been introduced at small ulcerated spots, a current of about one milliampère used for one, two, or three minutes, and the success has been definite. Mr. Thurstan Holland (Liverpool) showed a model of a screen for *x*-ray examination in the upright position, the idea being to afford protection to a large number of people standing in front of an *x* ray tube at the same time, such as a class of students. Dr. Reginald Morton (West London Hospital) read a note on some curious bony changes which were observed in a case of chronic *x* ray dermatitis. It appeared as though the two processes of destruction of bone and of repair were going on at the same time, and the progress of the disease contained other points of interest. Mr. Hall-Edwards (Birmingham) said that in his own case, at the part of the hand where the bones had eroded, there was no sore at all, and that, instead of the hand being enlarged, as generally happened in malignant conditions of the bone, the portion of the finger over the most deeply eroded part was smaller than normal. The final paper was read by Dr. W. Y. Somerville (Glasgow). It was a plea for a revival of high-frequency treatment, and a summary of the conditions in which high frequency currents were of service. He urged their value in neuralgic pains, in the pain that exists in fracture or sprain, as well as in various affections of the skin and in neurasthenia.

SECTION OF STATE MEDICINE.

THE opening meeting of this Section was held in the Senate room of the London University. Lord Ilkeston presided, and in his introductory remarks referred to the extreme gravity of the subjects which the Section

had to discuss. He said that for years past prominent and influential members of the Association had been sowing the seeds of social reform, and no body of men were more capable of giving advice to Parliament on such questions, for they spent their lives amongst those where reform was most urgently needed. He considered that the country was on the eve of great social reforms, which must of necessity follow the grant of old age pensions and the feeding and medical inspection of school children. The medical profession must take its part in the measures which had been promised for altering the existing Poor Law system, and dealing with insurance against sickness, inability, and unemployment. The profession must stand shoulder to shoulder so as to maintain public respect, efficiency, and independence. If, on the other hand, they pursued an individual petty policy, and allowed the intrusion of ordinary considerations unconnected with the profession, then disaster would follow. Mrs. Sidney Webb read a paper on the relation of Poor Law Reform to public health administration. She said that the recent Royal Commission on the Poor Law almost unanimously agreed that the Poor Law medical service should be drastically revolutionized. They found that the defects revealed did not arise from any shortcomings on the part of the Poor Law medical officers. The principal deficiencies were as follows: (1) The failure to provide any medical treatment at all for many cases, and to reach the others at the incipient stage; (2) the "deterrent" effect of the relieving officer and of the whole Poor Law system; (3) the adverse influence on treatment of inadequate remuneration and unsatisfactory conditions of the service, especially the burdening of the district medical officer with the cost of drugs—these shortcomings seemed to be connected with the subjection of a medical service to a non-medical administration; (4) the failure to provide for nursing, appropriate nourishment, and convalescence; (5) the lack of connexion between the domiciliary and the institutional treatment; (6) the inadequacy of the general mixed workhouse as a hospital; (7) the lack of suitable provision for phthisis measles, whooping-cough, and venereal diseases. The question raised by the Poor Law Commission and now being considered by statesmen was whether something more generally effective in the way of prevention of disease and more in the way of universally guaranteed treatment of disease at the early stages must not be required. The position was complicated by overlapping of rival rate-supported medical agencies—municipal hospitals, "health visitors" giving hygienic advice, organization of domiciliary nursing, active supervision of midwives, "milk dispensaries," medical inspection and treatment of school children, "school clinics," the placing of phthisis under the sphere of the public health authority—all these were rapidly encroaching on the domain of the private practitioner, and bringing about a hopeless confusion of principle as to what was the public and what the personal responsibility for sickness. There were three courses open: (1) To maintain the *status quo*, decorated with a few obvious reforms. But that way would lie destruction for the poor private practitioner. (2) The Majority Report, based on extension of the provident system and contract practice. This would not stop the overlap, and would leave both the Poor Law and Public Health Services to develop at the cost of the private practitioner. (3) The Minority Report, which proposed unity of administration, not rivalry or overlapping. It proposed that the existing Poor Law Medical Service with its infirmaries, and the Public Health Service with its isolation hospitals, should be merged, without interfering with the emolument or position of any existing officer, in a united new County Medical Service, with a properly distributed and adequately remunerated staff of clinicians and sanitarians, with general and special hospitals and sanatoriums, the whole under the supervision of the Health Committee of the local county or borough council, under the direction of a central department or Minister of Health, concerned exclusively with health administration. Private practice would be safeguarded by enforcing payment from those who could afford a small fee, and free choice of doctors would be strictly reserved for those who paid a fee, or provided in advance by provident insurance. Mrs. Webb's paper was followed by an interesting discussion. The majority of the speakers were in favour of the views and recommendations of the Minority Report, but there were a few dissentient voices. Dr. Ford Anderson, while not in favour of the *status quo*, was convinced that the Minority Report, if applied, would, as far as medical practice was concerned, lead to superficiality of treatment, deterioration of character, and enslavement of the medical profession. He approved of a scheme of provident medical service, with free choice of doctors. Dr. J. F. J. Sykes (M.O.H., St. Pancras) outlined the model rules for a public medical service as recommended by the British Medical Association, and expressed himself as strongly in favour of these proposals, rather than those of the Minority Report. Dr. Keay also spoke against the Minority Report. Dr. Lyster (M.O.H. Hampshire) advocated as a temporary measure the combination of the existing Public Health Service with the Poor Law Service. Dr. Manley (West Bromwich), Dr. Cooper Pattin (M.O.H. Norwich), and Dr. Holder (Hull) spoke in favour of the proposals of the Minority Report. Mr. F. E. Fremantle (M.O.H. Herts) advocated a more complete organization of the Public Health Service into four grades—(1) Local Government Board and inspection, (2) county M.O.H., (3) district M.O.H., (4) Poor Law medical officers, with promotion from lower grades to the higher ones. Dr. Rowland Fothergill (London) advocated the taking up of invalidity insurance by the medical profession. Dr. Bygott was in favour of amalgamation, and he considered that the Poor Law medical officer should be the colleague of the medical officer of health. Mrs. Sidney Webb briefly replied to the remarks of the various speakers, and the meeting then adjourned.

SECTION OF SURGERY.

AFTER a few words from the President (Sir Victor Horsley) indicating the arrangements for the work of the Section, Mr. Arbuthnot Lane opened a discussion on the principles which should govern the operative treatment of simple fractures. His general thesis—that to secure complete restoration of function and wage-earning capacity, perfect apposition, and perfect fixation of the fragments is essential, and that in the majority of cases this can be attained only by open operation—is well known. He intimated that the real question at issue is not what cases should be operated upon, but what valid contraindications are there to operation. The only negative indication he cited was such a texture of the fragments as would not permit a wire or screw to hold. The condition was met with in badly crushed bones in feeble old people and in alcoholics; the soft bones of rachitic children fell into the same category. The criteria of success in operating, are absolute asepsis, absolute immobilization and absolute adaption of the plates. Professor Lucas-Championnière, while admiring the excellent work of Mr. Lane, thought his method not one for adoption by every practitioner. He himself was satisfied with other treatment in most cases, but did not hesitate to operate on the patella, on fractures in the neighbourhood of the ankle, and in other specially difficult cases. He believed that he had constantly obtained perfect functional results without resort to operation, and without any heavy apparatus, in spite of some persistent deformity. Deformity was very largely the expression of muscular contracture which could be overcome by massage and movements. In the case of simple fractures, operation must never involve risk to life, and therefore must be in the hands of very experienced surgeons. Mr. Gilbert Barling pointed out that the vexed question of the proper treatment of simple fractures was one which lent itself satisfactorily to collective investigation, and that the time was ripe for some

such action. What was wanted was not only a careful selection of the surgeon to operate, but also careful selection of cases for operation. He referred to the very inaccurate conception, held in days before radiography, of the condition of parts beneath the skin in the proximity of even a simple fracture, and to the modification made by more recent knowledge in the attitude of surgeons towards operative measures for securing perfect reduction and apposition. It was not an easy matter to decide exactly which cases required operation as a *sine qua non* of successful healing, but at any rate it argued bad judgement to be forced to operate eight or ten weeks after a fracture, for the lapse of time enhanced the difficulties enormously, and jeopardized the chances of a perfect result. The great desideratum, however, was, not a pretty bone, but a useful limb. Mr. Deanesly said it was not fair to compare the results of the older methods with the operative, unless in the hands of men equally skilful and equally experienced. It must not be imagined that even operative reduction was an easy matter. He would reserve operation for certain special cases, such as those in the vicinity of joints. Professor Willems, of Ghent, thought more attention ought to be given to the proper employment of recent complicated but efficient apparatus, by the help of which many operations could be avoided. He used the open wound for reduction of the deformity in a good many cases, but inserted no foreign bodies, and relied upon plaster-of-Paris to maintain correct apposition. Mr. W. G. Spencer, whilst admitting the propriety of operating on old-standing fractures, believed that, at any rate in the case of the shaft of the femur, of which Mr. Lane had shown many operative examples, sufficient weight extension was efficient; that in the fractures near the elbow in children, the extreme-flexion position was satisfactory, and that not many Pott's fractures needed operation if the tendo Achillis were divided when there was difficulty in reduction. Mr. Whitelocke said he had found absorbable material, such as kangaroo-tendon or catgut, superior to plates and screws in many instances. Mr. Paterson made an eloquent plea for routine operation, declaring the risks minimal and the results infinitely superior to those obtainable by any other means. Mr. C. J. Morton, who illustrated his remarks by *x*-ray pictures of successes and failures, and Mr. Shenton, both spoke from the point of view of the radiographer. The former came to the conclusion that many cases could be treated not only without operation but even without splints, whilst the latter was a whole-hearted adherent of the Lane method. Mr. Hey Groves advocated the use of bone pegs for insertion into the medullary cavity of long bones, and referred also to operations upon the lower jaw. Mr. Fullerton maintained that in a very large percentage of cases of Colles's and Pott's fractures it was quite possible to get excellent results, if only proper care were exercised, without operation. The risks of operation were certainly not negligible. Mr. Fagge said what should be aimed at was a "perfect" result, and was obtainable only by operation. However, the operator and the conditions of operation must leave nothing whatever to chance, and it was not therefore a method open to all and sundry. Mr. A. S. Barling asked—was the meeting of opinion that a surgeon would be justified in urging stoppage of compensation in the case of a man refusing to submit to operation as the best available means of restoring his wage-earning capacity? Mr. Heygate Vernon, Mr. Crawford Renton, and Mr. Huggins all supported the view that operation was desirable in at least a proportion of cases. Sir Victor Horsley wished to emphasize the importance of examination of fractures on the fluorescent screen in enabling one to estimate the degree of efficiency of manipulative reduction of deformity, and to gauge the necessity for operation. Mr. Lane, in replying, remarked upon the change of attitude of surgeons towards his proposals, saying that he had never before met with sympathy, which now, however, seemed almost universal amongst the younger men.

SECTION OF TROPICAL MEDICINE.

THE President, Dr. Fleming M. Sandwith, in his opening address, drew attention to the advances in tropical medicine since the Section of Tropical Medicine was first formed at the meetings of the British Medical Association. Sir David Bruce, F.R.S., opened a discussion on sleeping sickness. Since 1904, when the subject was last discussed at the meetings of the Section, many of the beliefs then held have had to be modified. The *Glossina palpalis* continues to be regarded as the sole means by which trypanosomes are conveyed to man, although other species are suspected of doing so. There is no proof that *Trypanosoma gambiense* passes through any metamorphosis in *Glossina palpalis*. The following took part in the discussion: Dr. Andrew Balfour (Khartoum), Dr. John H. Cook (Uganda), Dr. G. C. Low (London), Dr. Wm. J. Prout, C.M.G. (Liverpool), and Dr. L. W. Sambon (London). Lieutenant-Colonel J. R. Roberts, I.M.S., contributed a paper on some features of tuberculosis in India. Mr. J. Cantlie, F.R.C.S. (London) read a paper upon liver abscess. Mr. Cantlie also discussed the use of lactobacillin (Metchnikoff) in tropical diseases of the alimentary canal. Dr. Andrew Duncan, Dr. R. Row (Bombay), and the President joined in the discussion.

DEATH CERTIFICATION.

AT the annual meeting of the Yorkshire and Derbyshire Registrars' Association, held recently, the following resolution was unanimously passed: "That this annual meeting of the Yorkshire and Derbyshire Registrars' Association warmly congratulates Sir Walter Foster upon his elevation to the peerage. The association has fully recognized for many years past the great value to the nation of his manifold services; and especially does it value to the fullest extent his extraordinary services and work on behalf of a better and sounder system of death certification." The hope was further expressed that the recommendations of the Departmental Committee of 1893 on Death Certification might speedily become the law of the land. The resolution concluded with the expression of a wish that Lord Ilkeston may be spared many years in which to enjoy the well-earned honour he had received from the King.

INTERNATIONAL CONGRESS ON THE CARE OF THE INSANE, BERLIN, OCTOBER 3rd TO 7th, 1910.

WE are asked to state that the following have been nominated to serve as a Committee for the United Kingdom to assist in arrangements for the Congress: Sir George O'Farrell, Dublin, and Dr. John Macpherson, Edinburgh (*ex officio* as members of the Permanent Committee for International Congresses); Dr. Bevan Lewis, Wakefield; Dr. M. J. Nolan, Downpatrick; Dr. Percy Smith, London; Dr. C. H. Bond, Epsom; Dr. W. R. Dawson, Finglas, Dublin; and Dr. J. H. Macdonald, Govan Asylum, Hawkhead, Paisley. Applications for membership of the Congress are to be addressed as early as possible to Herr Kalkulator Mietzner, 5, Prinz Albrechtstrasse, Berlin, S.W. The fee for membership is £1 (20 marks), and for a lady's ticket 10s. (10 marks).

HIS MAJESTY THE KING has graciously consented to become Patron of the Royal Sanitary Institute. The Institute was founded in 1876, and is carrying on a large work in teaching and examining in hygiene and sanitary science, both in the United Kingdom and in other parts of the Empire. It maintains in London a permanent Museum of Sanitary Appliances, open free to the public. Its members and associates number nearly 4,000.

England and Wales.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

LONDON.

THE MEDICAL INSPECTION OF LONDON SCHOOL CHILDREN.

THE Education Committee of the London County Council has issued a report with reference to a reorganization of the system of medical inspection which it is proposed should take effect from January 1st, 1911.

In a review of the question the committee stated that medical inspection prior to the passing of the Education (Administrative Provisions) Act, 1907, was limited in London to the annual testing of the vision of all children in senior departments of elementary schools, supplemented by the general medical examination of specially selected children from all departments. The Act required the inspection of all children upon admission to the schools, "and on such other occasions as the Board of Education may direct." The Board had decided that all children expected to leave during the year must also be inspected, and that a detailed record of each case must be kept. The medical and nursing staffs engaged on the partial inspection already in force were quite inadequate for this additional work, but, recognizing the magnitude of the task imposed on the Council, the Board of Education accepted a modified scheme, which provided for gradual compliance with the requirements of the Board during a period of three years. The staff of doctors rose from 40 in 1908–9 to 56 in 1909–10, and the number for ensuing years was to be 72. The scheme provided for the continuance of the original system of inspection in the majority of schools and for the examination of "entrants" and "leavers" in a limited number of schools during the first year, and for the gradual increase of the number of schools visited as additional doctors were appointed. The arrangements for the educational year 1909–10 provided for the continuance of these two types of inspection, but the Board was informed that in consequence of the arrangements for medical treatment, and in order to make the information in respect of each school more complete, it was probable that the doctors would examine during the year all the children in the schools inspected by them.

Board of Education's Criticism.

In reply, the Board of Education stated that it would find great difficulty in expressing satisfaction with an authority's arrangements for medical inspection unless:

1. Provision were made for the regular inspection of children entering school and children about to leave school.
2. A staff of inspecting officers adequate for this purpose was employed.

The Board further stated that the restriction of inspection of "entrants" and "leavers" to selected schools was obviously inconsistent with the provisions of the Act. Even if the scheme were rearranged with a view to examining all "entrants" and "leavers," the staff of inspecting officers employed was not adequate, the number of children in the two groups being estimated at 148,000. Even when the staff obtained its full prospective growth, on September 1st, 1910, there would be only seventy-two quarter-time officers available for this work. As a portion only of the "quarter-time" was actually devoted to medical inspection, the staff now engaged could not be regarded as equivalent in effect to fourteen whole-time inspectors, and when the full prospective strength was obtained the working power available for "detailed" inspection would be less than that of eighteen full-time inspectors. In order to complete the inspection of the two groups of "entrants" and "leavers" in London by a staff of fourteen whole-time officers, it would be necessary for each officer to inspect on the average 10,500 children in the year, and with eighteen whole-time inspectors each officer would have to inspect 8,400 children. Even in the most favourable circumstances the Board thought it would not be reasonable to expect an officer working full time at inspection to undertake the examination of more than 5,000 children. But, even if 7,000 children was adopted as the measure of the absolute maximum working power of a whole-time inspector, the Board stated that the existing provision of inspecting officers must be regarded as showing a deficiency to the extent of at least 50,000 children in the two groups—or more than one-third of the total requiring inspection—and the prospective appointments would still leave a deficiency on this basis of at least 22,000 children. In practice the Board had no doubt the deficiencies would be much greater. Accordingly the Board was very dubious as to whether the Council had, in fact, made provision for medical inspection in accordance with Section 13 (1) (*b*) of the Act of 1907. It was obvious that the Council's arrangements did not purport to be in accordance with the requirements of Article 58 (*b*) of the code, which required the examination of *all* "entrants" and "leavers," and not merely those in selected schools. The Board stated in conclusion that it was unable at present to regard the Council's scheme as satisfying the conditions of Articles 25 (*c*) and 58 (*b*) of the Code, and asked for the Council's observations on the various points raised.

The Education Committee's Reply.

The Education Committee, dealing with this communication, said it was recognized at the time of the adoption of the modified scheme of inspection that the staff sanctioned for the purpose would be the minimum required, and the possibility of additional appointments was foreshadowed. Since the introduction of the modified scheme, inspection of selected children had been abandoned, and every child in the schools visited by doctors had been examined. Whereas each school doctor could examine, on an average, only fourteen children a session under the schedule of the Board of Education, twenty children per session could be examined under the Council's modified scheme. It would take nearly five years to complete the inspection of the whole of the London elementary school children with the staff of 72 quarter-time doctors, which would be at work from September 1st, 1910. It was clearly the intention of Parliament that every child should be brought under inspection at particular stages of its school life, and that each school should be visited at least once a year by the school doctor. The system whereby children selected by the teachers as ailing alone were examined obviously did not satisfy the requirements of the Act. In place of this the Committee had come to the conclusion that provision should be made for the examination of the children of all schools at three age-periods, and had considered as to the most suitable ages at which inspection should be made.

The first period was fixed by statute as the first year of school life. With regard to the second period, the Committee thought children between 8 and 9 years of age should be examined, this being an important period in the life of a child from the health point of view. The third age-period should be at 12 years—this to take the place of the examination of children about to leave school.

Difficulty was experienced in dealing with children who attended the hospitals with which the Council had agreements without the necessary "voucher" card, and who were referred back by the hospitals to obtain the card. Such cases occurred, as a rule, in schools in which inspection had not been carried out; they would be reduced by the inspection of children of three ages in all schools, and by arranging that each school was visited not less than once a term. The work could be so distributed that, without requiring the children to travel unreasonable distances, it would be possible for those appearing to need urgent treatment to attend the nearest school at which inspection was in operation. The dates of the visits of the school doctors and nurses would be announced in the *London County Council Gazette*.

Calculation of the Staff Required.

There were some 220,000 children attending the elementary schools of the three ages at which the Committee proposed to arrange for inspection. In determining the staff which would be required, a sufficient margin should be allowed for special inquiries, the examination of urgent cases, and work connected with open air schools, playground classes, and other matters affecting the health of pupils and teachers, which the Board of Education regarded as part of the work of the school doctors. One-fifth of the time of the school doctors would be required for this work. The staff should be increased, therefore, to 100, by the addition of 28 assistant school doctors. If each doctor gave three sessions weekly for forty-four weeks of the year, this staff would correspond to 13,200 sessions annually. Deducting the one-fifth as above, there remained time equal to 10,560 sessions. As 20 children a session could be examined by each doctor, 211,200 children would be inspected in a year, a deficit of about 9,000, which would be covered by the inevitable leakage from illness or other cause of absence. The proposed increase of staff would not permit of the three years' rota agreed upon by the Council in regard to appointments of school doctors. A four years' rota must be substituted, the doctors who commenced duty on or since September 1st, 1908, being made eligible for a fourth year of service.

In consequence of the increased responsibility and supervision involved in this large staff, and in order to enable adequate attention to be given to special inquiries, the permanent staff would require to be strengthened by substituting two full-time assistant medical officers for one half-time assistant and one quarter-time assistant. Consideration had been given to the present system of dividing the inspecting staff into two grades in order to provide supervision—that is, school doctors at £150 a year and assistant school doctors at £120 a year, but the Committee had decided that more effective supervision would be secured if a full-time assistant medical officer were appointed, and there were only one grade of school doctor at a salary of £120 a year for three sessions a week. The saving on the salaries of school doctors would be £480 a year, and the salary of the full-time assistant medical officer would be £500 a year. These proposals would be adequate for the medical inspection of elementary school children for at least three years, but not of those at technical, secondary, and special schools. The ultimate expenditure involved would be £5,730 per annum.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Edinburgh Dental Hospital and School.

The annual "At home" of the Edinburgh Dental Hospital and School was held on Tuesday evening July 19th, when T. S. Clouston, M.D., LL.D., F.R.C.P.E., distributed the prizes and gave an address. He congratulated the dental profession on the brighter outlook that was now before it. The importance of good teeth was being realized not only by individuals but by public bodies. It was, he thought, merely a question of time when all schools would have a dental surgeon attached, and certainly in the army we should follow the example of our German brethren and have one or two dental surgeons attached to each regiment. All specialists were in danger of forgetting the claims and needs of the whole body. The organism was always greater than any of its parts. The law of unity and solidarity of the whole must never be forgotten by any specialist. The nervous system was the great bond of unity, and, through that, disease and disturbance of function in any one organ, even the least, might upset the working of mind and body; and nowadays, when the population was becoming more of a city one, the nerves got more keen, and in that way the whole body suffered greater disturbance from any local disease. The dental profession, having to do with the first and most important processes—namely, with digestion and nutrition—would always be one of the most important of the special departments of medicine. The body could not thrive, and there could not be a general feeling of health and comfort, if the teeth were wrong and the digestion bad in consequence. Even the mental working of the brain would be most seriously disturbed through the effects of no dentistry or bad dentistry. It was now known that very serious poisons (toxins) were generated through bad teeth, which had the power of disturbing both mind and body, and therefore impairing the power of work.

The President of the Royal College of Physicians moved a vote of thanks to Dr. Clouston for his address.

The Dean of the Dental Hospital and School (Dr. William Guy) reported a year of excellent work and progress. There were seventy-two names on the roll, and thirty-one students had obtained the diploma of L.D.S.

Proposed Edinburgh School for Tuberculous Children.

Dr. R. W. Philip, of the Royal Victoria Hospital for Consumption, Craigleith, has sent a letter to the Edinburgh School Board, asking consideration of a scheme for the establishment in connexion with the hospital of a school for tuberculous children, under the Defective Children's (Scotland) Act, 1906, and the Education (Scotland) Act, 1908. Dr. Philip proposes that he should provide the School Board with a site for a school within the grounds of the hospital, and that the Board should build and staff the school. Probably about half the children, it is understood, would come from the Victoria Hospital, and to these meals would be provided at the cost of the institution. It is thought that accommodation required to be provided would not exceed 100 pupils in all, and that a couple of teachers would be sufficient, while the buildings would not be of an expensive type.

Ireland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Award of Royal Humane Society Medal to a Nurse.

At their last meeting in London the committee of the Royal Humane Society awarded their bronze medal to Miss Eva Lindsay, a nurse at the Military Hospital, Dublin, for her attempt to save the life of a lady who was carried out of her depth while bathing. Miss Lindsay went to the lady's help, but on account of the strong current was unable to reach shore, and both were carried out to sea. After keeping her companion afloat for half an hour Miss Lindsay lost consciousness, and was ultimately picked up by a boat half a mile from shore, the other lady having sunk.

Charge of Manslaughter.

In the British Medical Journal of July 2nd (p. 58) there was reported the result of an inquest held at Bandon, co. Cork, touching the death of a girl aged 19, who had died from haemorrhage following the extraction of six teeth by an unregistered dentist, named John Taffe. Taffe since then was charged with manslaughter, and the case came before Mr. Justice Boyd on Saturday, July 16th. The case for the prosecution was that the deceased was in an unfit physical state at the time she went to the dentist to undergo an operation, and that the accused, in administering cocaine and extracting six teeth, was grossly negligent and, therefore, criminally responsible for the patient's death. After deliberation it was announced that the jury were unable to agree, and they were accordingly discharged.

Correspondence.

THE WORKING OF THE WORKMEN'S COMPENSATION ACT.

SIR,—What appear to me some very extraordinary statements are made by Dr. W. H. B. Brook in an article on the working of the Workmen's Compensation Act of 1906 in last week's JOURNAL. I should like to make a brief comment on two. Under the heading "Hernia" Dr. Brook says:

> In order to constitute valid ground for a claim to compensation it must be proved that the hernia has been due to sudden strain caused by the actual work at which the man was employed.

As a matter of fact and every day's experience in the courts, it is just as impossible for the workman to prove this as it is for the employer to disprove it, and the invariable rule through the courts is to give it in favour of the workman. Further, Dr. Brook says:

> It has been decided by a judge of one of the county courts that, even in a case where a workman has a good claim to compensation for hernia, he may be required to undergo an operation for the radical relief of that disability, and if he refuses to submit to such an operation he loses all claim to compensation.

I am sure there are a great many employers of labour in the country who would be deeply indebted to Dr. Brook if through the JOURNAL he will give the name of the judge who gave this extraordinary decision. The Court of Appeal has laid it down that if a workman can bring one medical man as a witness to say that he would be unwise to submit himself to operation, he is not bound to do so. I was myself not long ago a witness in a case where four medical witnesses, amongst them an operating surgeon of high standing, were opposed by one general practitioner. The judge was obviously reluctant to do so, but decided in favour of the man. This decision was upheld by a unanimous Court of Appeal.—I am, etc.,

JOHN T. HISLOP,
Medical Examiner for the North Wales Employers' Indemnity Company.

Wrexham, July 19th.

TRADE UNIONS AND SENTIMENT.

SIR,—As the son of a medical man in general practice, nothing struck me more on entering St. Bartholomew's than the absolute ignorance of the staff in general of all that appertained to the general medical practitioner. One member alone, and he at that time only an assistant demonstrator of anatomy, appeared to grasp the fact that some 95 per cent. of students would become general practitioners. He preached, in season and out, that men were entering the profession to make a living, and his advice as to how that living was to be made was based on practical experience. Judging by the inaugural and other addresses delivered by members of the staff of big hospitals, the same ignorance of the conditions under which general practitioners earn their living seems to prevail now. Medicine may be a profession, but where does the difference lie between a profession and a trade? We read these inaugural addresses, and are told that we are a band of noble philanthropists, whose aim is to benefit the rest of the world at our own expense. When we come to practice we find that what we do is at our own expense, and that the public gives us no credit for our philanthropy. Can you blame the public? They have instilled into them by the leaders of the profession that general practitioners are always willing to carry out their noble work, at a price if they can get it, but for nothing if they cannot. There is only one remedy for this. General practitioners must combine in such a way that their combination is effective. Whether this can be done by the British Medical Association as it stands at present is very doubtful. The only way is to form something resembling a trade-union in every district. At present the British Medical Association (except in a few well organized towns) has very little moral effect. As honorary secretary to a country Division I know this well. If I try to get recruits or to get members to attend meetings, etc., I am asked, "What is the good of it all? What does it do for us?" I can only offer a few problematical advantages. But if I could say, "You can, by joining, belong to a close corporation, that can effectually deal with all branches of professional etiquette, that can enforce scales of fees and prevent underselling," then there would be no trouble in enrolling a very big percentage of the profession, and we could easily deal with those who would not join. At the present time we may pass what ethical rules we like. If we enforce them and turn the offender out of the British Medical Association, he is not a penny the worse for it.

The point of view taken by the members of hospital staffs (or most of them) and that of the general practitioner is well illustrated by the addresses of Dr. Lauriston Shaw and Mr. Noy Scott published in the BRITISH MEDICAL JOURNAL of July 16th. Dr. Shaw has got hold of the right idea—the union of the profession. But how does he propose to bring it about? Had he the least idea of the difficulties of general practice, he would know that a sentimental union, such as he proposes, would be useless. Does he suppose that the man who deliberately undersells me, who sneaks my patients by underhand methods, or who advertises himself in objectionable ways, will be influenced by any appeal to his conscience? Of course, he won't. The nobility of the true aims of the profession is nothing to him. He is out to make a living, and finds that he can make a better one by unfair than by fair means. This is the sort of man we want a union to control, and such a union must be a strong one. There will be no room in it for sentimental twaddle.

Now turn to Mr. Noy Scott's address. He hits the nail on the head at once. We are a set of silly people, who allow ourselves to be sweated and underpaid, that we may pose as philanthropists and call on the public to admire our noble self-abnegation. And we have to do all this because we have no organization for the profession as a whole.

I do not think it would be very difficult to get such an organization if we start in the right way. The beginning must be made with the medical student. Let it be drilled into him that the medical profession, from his point of view, exists for one end, and for one end only—that he should make a living and make it honourably, and that the only way he can do this is by belonging to some organization which will really help him—help him to earn his own living by guaranteeing him fair pay for his work, and help him by preventing that living being taken away by men using unfair means. At the present time it does not pay a man to play fair; he can do much better for himself and his family by dirty means. If the student knows that as soon as he is qualified he can join a society which will protect him, so long as he behaves himself, and will drop on him heavily, so that he suffers material loss, and not "moral damages" if he doesn't, he will join promptly. At present, with only some 60 per cent. of the profession in the British Medical Association, membership of the Association is only a moral asset to any one.

I may seem to be bitter, but, as Honorary Secretary of a Division, I know that whenever I meet fellow medical men the sum total of their conversation is complaints of the conduct of their brethren. And at present we have no redress. The Model Ethical Rules put forward by the Association are excellent if we could enforce them, but we cannot, and the blacklegs know it only too well. Ethical questions are of as much importance to the ordinary general practitioner as scientific ones. Yet in the JOURNAL we may get columns of flapdoodle and a paragraph of ethics. Sentimental union has failed. Let us try a trade-union.—I am, etc.,

Helston, Cornwall, July 25th. MARK R. TAYLOR.

ON THE PRESENCE OF SUGAR IN HEALTHY URINE AS A SOURCE OF THE OSAZONE REACTION.

SIR,—Much of the controversy with regard to the nature and amount of the reducing substances occurring in normal urines has arisen from the difficulty in defining what is a "healthy" urine. As Drs. Pavy and Bywaters mention in their letter of the 23rd inst., "bodies of a diffusible nature, in any manner reaching the circulation, pass off with the urine," and its composition is therefore an expression of the metabolism of the body. If the chemical process of the organism and its environment are perfect a "healthy" urine will result, but if metabolism is imperfect in any way, or abnormal substances find their entrance into the circulation, the composition of the urine will be correspondingly altered. Modern conditions of life are not, as a rule, conducive to perfect

hygiene, particularly in towns, and the results of imperfect oxidation, a relative excess of food, a more or less inactive life, and, in some instances, the disturbances of digestion which result, are reflected in the urine, most commonly by the appearance of compounds of glycuronic acid. For it is by forming compounds with this substance that the body most regularly seeks to protect itself against toxins and other poisonous products, in much the same way as plants make use of calcium. In an investigation of 100 urines from apparently healthy people by the phenylhydrazin test some years ago, I found that 6 gave a reaction before and 13 after hydrolysis with hydrochloric acid, the reaction in each case being apparently due to glycuronic acid. The series, on being divided into a set of 43 derived from persons living in the country with an abundance of fresh air and exercise and a set of 57 obtained from city dwellers who lived under less favourable hygienic conditions, showed that none of the former gave a reaction until the urine had been boiled with the acid, and then only 3 yielded a crystalline compound, but that 6 of the latter gave a positive result before treatment with the acid and 9 after. One of these gave no reaction after a fortnight of open-air life at the seaside. The influence of diet, even in apparently healthy people, is illustrated by the series of examinations made by Schöndorff, to which reference has previously been made, for, whereas only 8 out of 53 students gave a reaction for sugar, 316 out of 334 specimens derived from soldiers in the garrison of Bonn gave a positive result, and it was found that the soldiers were taking over 700 grams of carbohydrate a day! In view of such facts, it seems to me essential that we should have much more definite information as to the environment, conditions of life, and real state of health of persons from whom "healthy" urines are derived before accepting conclusions from the results of their analysis as a standard.

I cannot agree with Drs. Pavy and Bywaters that glycuronic acid in the urine "is an incidental ingredient, outside the question that is being discussed." The amount and nature of the combinations in which it exists vary very much, with corresponding alterations in its reactions with reagents, but in my opinion it is the chief ingredient upon which the difference in reducing powers of urines depend, more especially in town dwellers, and it is to the liberation of glycuronic acid from some of its compounds that the increased reduction after hydrolysis is due. The sensitiveness of the ammoniated cupric test, which "renders it applicable to healthy urines," is in my experience one of the drawbacks to its clinical use, and the same applies to some methods of performing the phenylhydrazin test. For the latter I therefore employ Williamson's or Kowarsky's modification, both in the routine examination of urines for sugar and in the so-called "pancreatic" reaction. With regard to the latter, I may mention that out of a consecutive series of forty-seven urines submitted to me for examination during the past fortnight, twenty-seven have given a negative result—a very different proportion to what might be expected if the contention raised by Drs. Pavy and Bywaters in their paper of July 9th were correct.—I am, etc.,

London, W., July 24th. P. J. CAMMIDGE.

SHIP SURGEONS.

SIR,—The JOURNAL has recently published correspondence dealing with the conditions of medical work in the mercantile marine. It cannot be doubted that the conditions of such service, the same in these days of big ships and largely increased travelling as in the old days of small things, are at present not less unsatisfactory to the travelling public than to the medical officers at sea.

The Board of Trade require all ships carrying more than a certain number of souls to carry a duly registered medical practitioner, to whose services, free of charge, all members of the crew and all third class passengers are entitled by law. But there is no legal obligation to supply medical attention to "saloon" (that is, first and second class) passengers without charging them the same professional fees which they would pay were they residing in their own homes or at some hotel or boarding-house. A ship nowadays is just a travelling hotel. The ships thus required by law to carry a medical man may be divided into two classes. In one class should be included those small ships carrying a small crew and but few passengers, on which the medical work would undoubtedly be light and of small importance; probably on such vessels the usual pay of £10 a month *plus* board and lodging would be a sufficient remuneration, and the work such as would not put too great a demand on the medical officer in search of health or with a desire to see the world. But things are very different in a second class of ship which would include the great liners running regular services all over the world. These big ships carry large crews and great numbers of passengers, and it is well to remember that included among the latter are usually many people of important social or business standing. A ship with a crew of 400 or 500, and carrying between 1,000 and 3,000 passengers, engaged in a week's voyage to America, or a six weeks' journey to Australia, must, it is obvious, form a large "practice" for a medical man, even were the average of health as good as would obtain ashore among an equivalent number. But, as a fact, the health average on a ship is a low one; the work of the crew is hard and confining, certainly not conducive to health; while there is an added risk of accident. The passengers, feeding too much and exercising too little, are a ready prey for the minor maladies, and include among their number, in all classes, a large proportion travelling "for their health." But, in addition to the purely medical work of looking after all these people, the ship surgeon has usually to arrange all the *details* of the special attention and diet required by his patients, and to act as his own dispenser. In addition, an effective ship surgeon must act as an energetic medical officer of health; has often an enormous amount of vaccination to perform; is expected to keep an eye on the food supplied; and, last but not least, has to obey the behests, often unreasonable, of various quarantine authorities. At sea he is alone; there is no local medical officer of health to call in for a doubtful case of infectious disease, and he cannot send his patients to this or that specialist. It would be easy to enlarge under this head, but enough has been said to show that the popular idea, both of the public and the medical profession, that a ship surgeon has little work to do on board, and that any "slacker" is good enough for the job, is a very erroneous one. It would be easy to prove from my books that, both as to number of attendances and variety of cases, my practice on an Australian mail liner is far and away larger than that of an average general practitioner.

To perform the duties required of him properly a sea surgeon should be, in his way, a specialist, and the last person to fill a position of such isolated responsibility should be the just qualified and entirely inexperienced young man or the man, who from reasons of health or moral habits, is not dependable. The medical service of our mercantile marine should be in the hands of men trained to the work, remaining in the work and adequately remunerated, and there can be no doubt that the time has come when, both in the interest of the public, the owner, and the medical profession, this service should be put on such a basis as will permit one who adopts the sea to regard his service as a permanent employment. Such is the case in the Royal Navy. By comparison the medical work in the mercantile marine is far harder and more responsible. Personally, I am of opinion that everything is ripe for reform, but as the alteration of the established is always difficult, and old customs are not easily uprooted, any agitation for an improved condition of service must be conducted with consideration and tact. While we know that shipowners have to some extent "farmed" the medical profession, we must remember that we have ourselves acquiesced in the position, and that while the remuneration given is an absurdly inadequate return for a conscientious discharge of duty, it has, in very frequent cases, been excessive for the services actually rendered. Owners, as business men, will buy in the cheapest market. Further, we have to remember that their medical service brings no grist to the owner's mill. On the other hand, in these days of strict quarantine, the owner realizes that an effective medical service will pay him, but competition is such that I appreciate the fact that he cannot really afford to pay an adequate salary for a service which brings no money return. But the solution is an easy one. Let the owners continue to pay a small salary for the treatment of crew and emigrant and permit the surgeon to practise, as he would ashore, among the first and second class passengers.

I believe that this matter could be arranged very easily if the British Medical Association were to take the question up with some of the important lines. The Association should act as father to the whole of the profession, and I see no reason for any association of ship surgeons—by nature of the work, an utter impossibility—or for a committee who will represent only their individual selves. Without any fuss or friction, the thin end of the wedge of improvement has already been inserted by private effort, and, given a good start, the good work will go on.

The "aims" of Dr. John F. Elliott's Committee, as set forth in the JOURNAL of July 9th, are rather large—let us remember that the surgeon exists for the ship, not the ship for the surgeon. It is not reasonable to expect the owners to provide great hospital accommodation or special "facilities for the performance of surgical operations." It is only a rare case of urgency that demands operation before the ship reaches the next port. The "status" of a ship surgeon is usually, as elsewhere, what he makes it himself.

As the senior medical officer of a well-known line, and with the experience of some nine years, it is not without a full knowledge of all the conditions of medical work at sea that, while in complete sympathy with a reform of the service desired by Dr. Elliott and his friends, I regret the somewhat dictatorial terms of his manifesto as calculated to embarrass a friendly adjustment of the interests at stake—that is, those of the public, the owner, and the sea practitioner.

In my opinion, there is no necessity for a warlike committee. Let the discussion of the matter by the surgeons concerned be encouraged in the medical press, and let the already constituted authorities of the British Medical Association, in discharge of their duties as representative of each and every branch of medical work, enter into friendly negotiation with the managers of our great steamship lines. Such action will undoubtedly bear fruit.

But if a more or less unrepresentative committee attacks the shipping companies with demands (*a*), (*b*), (*c*), (*d*), (*e*), (*f*), and (*g*), they will be told, more or less politely, to allow the managers to manage their own affairs.—I am, etc.,

Moraston House, Ross, July 23rd. P. HEYWOOD HADFIELD.

Universities and Colleges.

UNIVERSITY OF DURHAM.

THE following candidates have been approved at the examination indicated:

THIRD M.B., B.C. (*Pathology, Medical Jurisprudence, Public Health, and Elementary Bacteriology*).—*S. K. Young. *T. C. Storey, E. C. Abraham, F. E. Chapman, Evelyn A. Constable, F. J. H. T. Frere, N. Hodgson, J. Kerr, E. Kidd, G. E. W. Lacey, F. J. Lidderdale, J. G. Ogle, F. Phillips, B.A.

* Second-class honours.

UNIVERSITY OF EDINBURGH.

The Retirement of Dr. Clouston.

AT the June meeting of Edinburgh University Court the following minute was adopted:

"The University Court have received with much regret the intimation of Dr. Clouston's resignation of the Lectureship in Mental Diseases. The Court record with gratitude their appreciation of the valuable services rendered by Dr. Clouston during the thirty-seven years in which he has been a teacher of the subject in the university, first in connexion with the classes of Practice of Physic of Professors Laycock and Sir Thomas Grainger Stewart, and since 1879 as the holder of the University Lectureship in Mental Diseases, which was instituted in that year.

"During this long period Dr. Clouston has proved himself a singularly successful and able teacher. His great reputation as a specialist in mental diseases and his eminence as a worker and writer on the subject have exerted an inspiring influence upon the large numbers of students who have attended his classes. They, as well as the University Court, have fully realized the great advantages of having as the Lecturer on this subject a distinguished pioneer in the scientific study of disorders of the mind and one of the first and most active of the promoters of the benevolent reforms in the care and treatment of the mentally afflicted which have signalized the latter half of the previous century."

CONJOINT BOARD IN SCOTLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE.—*E. E. Doyle, R. E. Illingworth, N. R. Whitaker, C. Cosgrove, B. A. Young, A. F. D'Souza, W. S. O'Loughlin, L. C. Mascarenhas, T. E. Lawson, Rose Moskovitch, W. M. Sebeti, K. Fraser, C. Mallikarjunarao, P. de Montagnac, W. C. Fraser, S. Jesudason, H. J. Henderson, G. Hardie.

SECOND COLLEGE.—W. P. Over, L. Lazarus, S. Wright, G. W. Fleming, *C. C. Forsyth, E. I. Parry, J. W. Craig, C. J. L. Patch, E. E. Doyle, J. Bourke, F. G. Gibbs, J. I. Arnold, L. E. L. Coghlan.

THIRD COLLEGE.—A. Jonathan, F. M. H. Sanderson, J. H. Appoo, W. A. Reardon, C. M. Willmott, G. I. Secluna, R. Eyton-Jones, J. Hegarty, N. S. Williams, P. M. Carroll, Amy B. R. A. Perriton, N. P. Vaid, C. J. Lacayo, R. H. Thomson, W. F. Gibb, W. J. Moore.

FINAL COLLEGE.—J. J. O'Grady, A. E. Tughan, T. N. Usher, I. R. MacLeod, A. D. Turnbull, H. E. K. Fretz, R. W. D. Hewson, R. B. Sephton, H. D. Stewart, C. W. Kay, H. G. Chouler, M. J. O'Shea, E. Thorpe, T. B. Johnstone, T. N. Sinha, V. D. Nimbkar.

* With distinction.

Medical News.

HIS MAJESTY THE KING has been graciously pleased to become Patron of King's College Hospital.

ON Wednesday of this week a case of much interest to medical men was heard before the Bench of Magistrates of Acton. It is a district in which the Notification of Births Act has been adopted, and a medical man who had been in attendance during a confinement was summoned for failing to give notice in writing of the birth of the child within the statutory thirty-six hours. The medical man in question had directed a fully qualified nurse, also in attendance on the case, to give notice or to see that the father did so, and she replied that it would be done. The notice, however, was not given, and the local council contended that the defendant ought to have taken steps to see that his orders were carried out. The defendant was represented by Mr. Schwabe as counsel, instructed by Mr. Hempson on behalf of the Medical Defence Union. It was argued that the medical man had reasonable ground for believing that notice would be given by some person, and that under the Act this was a complete answer to the charge. The Bench took the same view, dismissed the case, and allowed five guineas costs.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on Friday, July 15th, Dr. de Havilland Hall in the chair. During the last month the claims have shown signs of steady increase, and are now nearly up to the normal expectation. The new proposals show a tendency to fall off and are fewer in number than for the corresponding period last year. It does not seem to be generally known that dental surgeons are eligible for membership of the society. In order to clear up any doubts about this, it may be as well to point out that all duly registered dental surgeons are eligible to join. The rates charged by the society are considerably less than those charged by any other insurance company for similar benefits, and it is hoped that members of the medical and dental professions will soon recognize the expediency of joining a society which can offer such liberal terms and excellent security, and which is and has been run entirely and solely for their benefit for just over twenty-six years. Prospectus and all information can be obtained from the Secretary, Mr. F. Addiscott, 33, Chancery Lane, London, W.C.

Obituary.

LIEUTENANT-COLONEL G. HERBERT ROWE,

LEEDS.

IT is with feelings of the greatest regret that we have to record the death at the comparatively early age of 53, of Lieutenant-Colonel G. Herbert Rowe. He was the son of the Rev. George Rowe, Principal of the Diocesan Training College at York, and entered as a student of medicine at Leeds in 1874. From that time, with the exception of a short period after obtaining his qualifications, during which he held resident appointments at Wolverhampton, Worcester, and Scarborough, his life's work was identified with Leeds, where he commenced practice in association with his father-in-law, the late Mr. C. G. Wheelhouse. Colonel Rowe held many public appointments during his professional life. Among these may be mentioned that of Surgeon to the Public Dispensary, a position to which he was appointed in 1884. In the work of this institution he took the greatest interest, and his colleagues will always

remember his valuable leading in considering the requirements to be met in planning the new buildings, and the tact he displayed in smoothing over difficulties in connexion with the establishment of the dental department. He acted as Demonstrator of Anatomy for seven years, and his influence with the students was excellent.

For many years Colonel Rowe took an active part in the management of the West Riding Medical Charitable Society. He was associated with Mr. Wheelhouse as co-secretary for a long period, and became thoroughly imbued with all Mr. Wheelhouse's enthusiasm for the welfare of the society. When Mr. Wheelhouse died there was no doubt in the mind of any one as to who should be his successor, and Colonel Rowe will always be held in grateful recollection by his professional brethren as one who was unsparing in his work for the welfare of this most admirable charity. For a good many years Colonel Rowe acted as Warden of Lyddon Hall, which is one of the residential halls of the University. In that capacity he has done admirable work, and the University has also appreciated his services as Honorary Marshal. At the time of his death Colonel Rowe was the Commanding Officer of the 8th Battalion West Yorkshire Regiment (Leeds Rifles), and it is probably as an enthusiastic soldier that he will be best remembered in Leeds. As has been well pointed out in the local press, his enthusiasm in all matters relating to the army was intense, and Leeds never turned out a better soldier, and we cannot do better, in touching on his military career, than quote as follows from the *Yorkshire Post*:

Volunteering to him was never a mere hobby; it was a serious duty, and his conception of his duty showed itself in many ways, from the moment he joined the Volunteers while yet in his teens up to his last official act as commanding officer Enrolled as a Volunteer in the York Rifles in 1872, he became Sub-Lieutenant four years later and Lieutenant in 1878, and he had only three more years to wait for his Captaincy. His connexion with the Leeds Rifles began in 1883, when he joined the regiment as Captain. In 1891 he became Honorary Major, and three years later Substantive Major, and his promotion to the rank of Honorary Lieutenant-Colonel came in 1896. The Volunteer Officers' Decoration, which was conferred upon him in 1895, was a distinction that was well earned and highly prized.

Under Colonel F. W. Tannett Walker, Colonel Rowe was for many years second in command of the Leeds Rifles—7th Battalion West Yorkshire Regiment. How, when the Territorial Force came into existence, the regiment developed into two battalions is now a matter of history. The chief feature of the rearrangement was the formation of a new battalion on the south side of the River Aire. To Colonel Rowe was entrusted the task of raising the new unit. Many doubted the possibility of getting together sufficient men in that part of the city to constitute a separate battalion. It was here, however, that Colonel Rowe's enthusiasm had full play. Calling together meetings of the artisans employed in the engineering sheds and factories of South Leeds, he spoke to them with an earnestness that kindled their zeal, and it was not long before the 8th Battalion became an accomplished fact, with Colonel Rowe in command. With what success he carried out the undertaking may be gathered from the fact that the battalion has now attained its full strength of 1,005. Colonel Rowe was an active member of the Yorkshire Territorial Association, and was vice-chairman of the Finance Committee.

On Wednesday, July 20th, with full military honours, and with many manifestations of sympathy on the part of the general public, the institutions which he served, and his professional brethren, there was laid to rest in Lawnswood Cemetery the body of one who will long be missed, and whose memory will be for many years kept green by the good work which he has accomplished in and for Leeds.

CAPTAIN E. D. SIMSON,

INDIAN MEDICAL SERVICE.

IT is with much regret that we have to announce the death on July 22nd at Nowshera, India, of Captain Simson. His death was due to cholera. Educated at Merchiston Castle, Edinburgh, Captain Simson studied medicine at Edinburgh University, graduating M.B., Ch B. in 1906. He then entered the Indian Medical Service. All old Rugby football players will learn with deep regret the death of "E. D.," as he was known to Edinburgh football players. While at school he was a long way ahead of the rest of the team, and afterwards, when at Edinburgh University, he at once became a famous half-back. He was a great power in the university football club, of which he was at one time captain, and in many other branches of student life he made his influence felt, and always for good. It was in 1902, just after leaving Merchiston, that he gained his first "cap" for Scotland. That was against England, and he never missed an international game thereafter, until, having got his degree, and having passed into the Indian Medical Service, he gave up the game and went abroad. He held a record for international matches, having played in seventeen, including that against the New Zealand "All Blacks."

One sad feature in connexion with his death was the fact that his marriage had been fixed for September, his passage home having been actually taken. Captain Simson was a son of the late Mr. Robert Simson, Bengal Civil Service, and his early death at the age of 28 leaves a blank in the Indian Medical Service which will be difficult to fill. As Dr. Kelman said in referring to his death, "Clean, strong, and simple, with no show and all reality, he played the game always, in life as in athletics, and played it magnificently." A well-deserved tribute.

The Services.

THE MEDICAL CONSULTATIVE AND MEDICAL EXAMINING BOARDS.

THE following appointments to the Medical Consultative Board and the Medical Examining Board, on their reconstitution, have been made at the Admiralty:

Medical Consultative Board.—President: The MEDICAL DIRECTOR-GENERAL OF THE NAVY. Civilian Members: Sir WATSON CHEYNE, D.Sc., M.B., Sir DYCE DUCKWORTH, M.D., LL.D., and Professor W. J. R. SIMPSON. Naval Member: Inspector-General H. J. McC. TODD.

Medical Examining Board.—President: The MEDICAL DIRECTOR-GENERAL OF THE NAVY. Members: Mr. JAMES GALLOWAY, M.D., and Mr. H. D. ROLLESTON, M.D., for Medicine; Mr. G. L. CHEATLE, C.B., and L. A. DUNN, M.B., for Surgery. Secretary: Fleet Surgeon J. L. SMITH, M.B., M.V.O.

ROYAL ARMY MEDICAL CORPS (TERRITORIALS).

LOWLAND DIVISION MEDICAL UNITS.

THE 1st, 2nd, and 3rd Lowland Field Ambulances completed their annual training at Gailes Camp this week. Much of the training was handicapped by the broken weather, and by the departure of a fully-equipped section from each unit for the manœuvres on the shores of the Firth of Forth. During peace each ambulance is provided with the equipment for a section only, for instructional purposes, and the order to send a section fully equipped for service with the troops on manœuvres leaves the remainder of the units without equipment of any kind. During the training fortnight, however, officers, non-commissioned officers, and men have been thoroughly grounded in all the branches of field training as far as circumstances would permit. Lectures were delivered daily, and practical work in tent-pitching, preparation of bivouacs and shelters, first field dressing, sanitation, preparing of destructors and latrines, water duties, etc., undertaken in addition to the stretcher and wagon exercises. Combined sports were held on July 21st, before the departure of the eight-day men. The three sections left at the beginning of the week for the manœuvre area, the section of No. 1 under Major G. H. Edington, No. 2 under Major J. McKie, and No. 3 under Major McIntosh. Lieutenant-Colonel A. D. Moffat, commanding No. 2, was Director of Medical Services for the Defending Force, while Lieutenant-Colonel A. A. Ross, 3rd Lowland, and Major P. F. Shaw, 2nd Lowland, acted as Administrative Medical Officers. The Raiding Force was composed mainly of Regulars, the Director of Medical Services being Colonel Yarr, R.A.M.C. Lieutenant-Colonel R. T. Halliday and Major H. Wright Thomson, of the Mounted Brigade Field Ambulance, were Administrative Medical Officers of the Southern and Northern Divisions of the Raiding Force respectively.

The 3rd and 4th Scottish General Hospitals, under Lieutenant-Colonel D. J. Mackintosh, M.V.O., and Colonel A. Napier, V.D., had their training at Woolwich, as last year, and return to Glasgow on July 30th.

THE MANŒUVRES IN FIFESHIRE.

The medical arrangements in connexion with the manœuvres were very thoroughly organized by Colonel Wodehouse, the P.M.O. of the Scottish Command. As over 35,000 troops were to be engaged either on the Fife coast or on the southern shore of the Firth of Forth, and as this was the first attempt in Scotland to carry out manœuvres on such an extensive scale, the task of providing the requisite medical services was no light one. Detailed instructions were issued for the combatant officers and men taking part, insisting on the importance of keeping fit, attending to sanitation, the care of the feet, the wearing of woollen under-garments, the necessity of keeping warm and dry in bivouacs, etc. Instructions were also given in detail as to the procedure to be followed in the case of sick from the various centres of the manœuvre area, and their removal to home or hospital. Though short, the training should be valuable in preparing all ranks for service conditions.

Medico-Legal.

EVASION OF THE VETERINARY ACT BY COMPANIES.

THE Court of Chancery on July 19th heard an action in which the Attorney-General claimed an injunction restraining the defendants (a company and an individual), their servants or agents, from taking or using any name, title, addition, or description implying that they were specially qualified to practise the art of veterinary surgery, or from holding out the company as being qualified, or as being conducted by persons who were qualified, to practise the said art, or from receiving fees for the practice of the veterinary art, or from practising the said art, or from performing any acts usually performed by veterinary surgeons for rewards.

It was stated by counsel that the company had upon its premises a signboard bearing the words "Churchill's Veterinary Sanatorium. Dogs and Cats Boarded. James Churchill, M.D., U.S.A., Specialist and Managing Director. Advice Gratis." It had also published an advertisement running "Churchill's Veterinary Sanatorium, King Street, Richmond. 'Home from Home for all Animals.' Where they can be received as boarders, or under treatment for all complaints. Ladies' pets are under a lady's care, and are properly looked after and fed. Separate kennels for large dogs and cats. Write for terms to the Managing Director." The only director of the company was the defendant, James Churchill, and as such he was the manager of the business. It was added that he was not and never had been qualified to be on the Register of Veterinary Surgeons, and that he had been successfully prosecuted for breach of the Veterinary Act, Section 17, and that on his moving in succession to other places further prosecutions had been withheld owing to his giving a signed undertaking to discontinue the use of the words of which complaint was made. Finally, when he found he could not carry on his veterinary business without risk of prosecution he formed himself into a joint stock company.

Mr. Justice Neville, in giving judgement, said the Veterinary Act contained nothing to prevent a company calling itself Churchill's Veterinary Sanatorium, Limited, but such a company to describe an unqualified member or agent as a practitioner of veterinary surgery was contrary to the provision of Section 17 of the Veterinary Act. The company had done and was doing this, and he would therefore grant the injunction sought. It would be one restraining the defendants from using any description of Churchill indicating that he was a veterinary surgeon, or a practitioner of veterinary surgery, or any branch thereof.

In the course of his judgement, Mr. Justice Neville dismissed one by one the arguments by which it was attempted to show that the signboard used did not imply that the defendants were specially qualified to practise veterinary surgery, or that they received fees for such practice. He also remarked that the whole difficulty in cases of this kind arose from the fact that the House of Lords had held that a person did not include a company. When an offence consisted in the taking of a name, he could not conceive why a company should not be as guilty of it as an individual.

WORKMEN'S COMPENSATION.

Alleged Milk Poisoning.

IN this case (Birmingham, June 17th) the question was, "Does a man employed to milk cows who gets blood poisoning owing to milk congealing under his finger nails come within the meaning of the Compensation Act?" The applicant was employed as a cowman by the respondent, and continued to discharge his duties until May 4th. It was stated to be a well-known fact amongst cowmen that in milking cows the fluid might get under the nail, and in the course of a few hours would harden. If the milking was continued the hard substance beneath the nail irritated the flesh and abraded it. Milk was one of the most common media for microbes; and it was suggested that in the course of later milking the applicant contracted septic poisoning. The applicant had to leave his work owing to his hand swelling up, and he was treated at the hospital for blood poisoning. He now claimed compensation at the rate of 11s. 6d. per week—half his wages. Medical evidence was given to the effect that the poisoning might have come by the process suggested by the applicant. On behalf of the employer it was contended that there was no accident at any time. The condition leading up to the poisoning had come by gradual process. His Honour found against the applicant, holding that it was impossible to say at what particular time the act which caused the poisoning occurred. It was a case of gradual formation of disease.

CONTRACTS NOT TO PRACTISE.

MR. J. G. WILLIS (Barrister-at-Law, Bishop Auckland) writes to point out an inaccuracy in the answer to "Delta," under the above heading, in the JOURNAL of July 2nd, 1910, p. 59. He says: "The answer states that where the agreement is by deed no consideration is necessary. This is quite true, but contracts in restraint of trade form an exception to the general rule. A contract in restraint of trade requires consideration, even though the contract is by deed." We regret that by inadvertence we overlooked the exception to the general law about contracts in restraint of trade. It should have been stated that when the agreement is one in restraint of trade, although it be by deed some consideration is necessary.

We have received a letter on the same subject from Mr. Percival Turner in which he says "that in cases of the sale of medical practices it is the almost invariable custom to restrain the outgoing party for all time. In the course of thirty-five years' experience, and having had some thousands of such contracts pass through my hands, I have never consented to a time limit. It has been upheld in the courts of law that a perpetual injunction within reasonable limits is valid. To take an instance that often may and does occur: A. sells his practice to B. with the usual perpetual restriction; at the end of, say, ten years B. dies and B.'s representatives can dispose of the practice to C.; but if there had been a time limit and B. had died just at the end of it, B.'s representatives would be utterly unable to sell at all, seeing that A. could return and would be in no way legally restricted from practice."

To this we reply that although Mr. Turner does not himself consent to "time limits" in agreements which he draws, and the courts may frequently uphold them, the law distinctly requires these limits to be reasonable, that is, to be not more than is necessary to protect the party on whose behalf the restraint of trade is made. We are advised that it is not necessary in all cases to restrain the outgoing party for all time, and if in any case the court did not think such a restriction necessary it would not enforce it. A solicitor, to whom the case was recently put, said that it was certainly not usual in most businesses to insist on a restraint for all time, and that it should not be done except in cases where it was absolutely required; that no doubt the court would enforce it.

AMBULANCE LECTURES AND MEMBERSHIP OF PARISH COUNCIL.

KAPPA writes that he is a member of a parish council, and on some four or five occasions during the last ten years he has been requested to give a course of ambulance lectures for which he has been paid by the clerk in due course. Recently the legality of this payment has been questioned. He wishes to know: (1) Is the appointment of ambulance lecturer "an office of profit"? (2) If so, does he become disqualified as a member of the parish council by accepting payment? (3) If disqualified, how can he be reinstated?

*** (1) Such an appointment would probably be regarded as an "office of profit." (2) Our correspondent might become disqualified by accepting such payments, but whether he has actually become so could only be ascertained by taking a legal opinion based on all the circumstances of the case. (3) If disqualified, he could be reinstated only by being re-elected by the ratepayers if the disqualification shall have voided his office. Whether or not this is the case may also be a legal point only to be decided by an exact inquiry into all the facts of the case. It should never be forgotten that the general law is that no member of a public authority can accept payment from the same for official services so long as he continues a member.

CLUBS AND UNSTAMPED RECEIPTS.

A CORRESPONDENT writes that he is a club surgeon (Foresters), and has recently had an unstamped receipt returned to him by the club secretary, who states that the auditor declines to receive it without a stamp. He wishes to know the authority for the statement on p. 1270 of the BRITISH MEDICAL JOURNAL that such receipts did not require a stamp.

*** Our authority is the Friendly Societies Act, 38, 39 Vict., Ch. 60, S. 15 (2) (b).

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee, except when so stated.

THE PUFFING OF HEALTH RESORTS.

FELIXSTOWE DOCTOR.—The medical officer of health of a health resort could hardly refuse to help the local authorities by contributing a short article on the climate and water supply for the local guide, and we can see nothing to take exception to in what he has written or in his article being prefaced by his name and degrees.

MIDWIVES AS ASSISTANTS TO PRACTITIONERS.

INQUIRER.—We think there would be a serious ethical objection to the suggested arrangement whereby the doctor and midwife are to act in a sort of partnership. We see none, however, to the practitioner retaining the services of the midwife as his assistant. The practitioner's name should not appear on the same plate as that of the midwife as suggested.

NEWSPAPER PUFFS.

ETIQUETTE.—There is a clear distinction between the newspaper puff of a young man entering on practice and the account that may appear in a newspaper, laudatory, it may be, of a practitioner retiring from practice. While the former is, from an ethical point of view, improper, we think most persons would disagree with our correspondent in thinking the other open to the same censure.

Letters, Notes, and Answers.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

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CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. L. D. desires to hear of a good boarding school for the daughters of medical men where moderate inclusive fees are charged.

J. P. writes: Will any reader oblige me with a diagnosis and prognosis of the following case? Child, male, aged 14 months, fat and well nourished, expression placid; hands, fingers clenched and drawn to ulnar side of palm, tips of fingers rather wasted; toes drawn up; child also seems to have stiffness of back, and when sitting on the floor usually falls on back of head. The unusual part of the case is the history. The child was born with the hands so tightly clenched that the fingers left deep pits in the palms of the hands. The condition seems to be improving, but the child can neither walk nor talk. The hands can now be opened flat, but soon close again. The mother, who seems to be a healthy young woman, slipped and fell sitting about a month before her confinement. Confinement seems to have been normal, and fairly easy for a first one.

ANSWERS.

RADIATOR.—(1) Application should be made to the local officer of Customs and Excise for a form, No. 232 B, on which to claim repayment of the full tax paid on petrol used up to January 1st, 1910, and one-half the tax on that used subsequently. The claim should be accompanied by certificates from the dealer showing that the tax has actually been paid on the petrol. (2) If the car is used to any considerable extent for such professional purposes as those named a deduction would clearly be due in respect of the cost of maintenance of the car and the insurance premium. The proportion of the total expense that would be admissible would depend upon the relative extent to which the car is used for professional purposes. There is no reason why our correspondent should not deduct what he considers to be an appropriate amount in arriving at the sum to be returned as his profits.

COLOUR BLINDNESS AND THE BOARD OF TRADE.

IT is difficult to say why "C. H. J.'s" patient was rejected as colour blind by the Board of Trade. The tests applied by the Board are so obsolete and inadequate, and are employed with so little special skill, that it sometimes happens that persons with normal vision fail to pass the examination, while not a few dangerously colour blind men satisfy the examiners. It is essential that a seaman should have perfect vision in both eyes, and that he should be able rapidly to recognize red and green under all possible circumstances. Any one showing the slightest hesitation in naming colours, whether in the shape of coloured wools or lights, or who fails to match colours, should be unhesitatingly rejected. "C. H. J." should examine his patient with the Edridge-Green colour perception lamp; the ordinary wool tests are quite futile. The whole question will shortly be considered by a commission of experts appointed for the purpose by the Board of Trade.

LETTERS, NOTES, ETC.

THE CAUSATION OF SEX.

DR. T. DUNCAN NEWBIGGING (Abington, Lanarkshire) writes: I would like with your permission to point out some errors made by "T. W. B." in your issue of June 11th. He says (p. 1452) that the queen bee lays her eggs "one in each cell *indiscriminately* in all available cells." I can assure him the queen does nothing "indiscriminately." Only under certain conditions will she lay in drone or queen cells, for example, when the "spirit of the hive" has decided on swarming. He says further, "These eggs, of course do not differ in composition." Now why "of course?" especially when it is an undoubted fact that these eggs *do differ in composition.* Queens and workers are raised from fertile eggs. Drones are raised from unfertile eggs. The queen having control over this matter, when she lays in drone cells (I am speaking of a fertile queen), she prevents the spermatozoa escaping from her spermatheca, an infertile egg is laid; this becomes a drone. When she lays in worker or in queen cells she permits union of the male and female elements. According to the quality and quantity of the food fed to the larvae from these eggs, and according to the size of the cells in which they grow, they becomes queens or workers. Again, he says, "but I do not agree with the theory held by so many of my fellow bee-keepers that the so-called bee jelly feeding accounts for her sex"? I cannot think any bee keeper holds any such theory. Both queens and workers are female, the queen being a fully-developed female and the worker an undeveloped female—a female with undeveloped ovaries. Many workers are so far developed females as to be able to lay eggs, while not sufficiently developed as to be capable of being fertilized by the drone (the male bee); such laying-worker eggs hatch out drones, no matter in what size of cell they are laid. The sex is not therefore determined by the food fed to the larvae, although the food fed to the larvae undoubtedly has an influence in the full development of the female organs. In fact the food fed to mature queens decides whether they will lay at all or not. "T. W. B.," in fact, states this. Now, that "T. W. B." is wrong in his opinion "that according to the size and formation of the cells will the sex be, according to the moulds in which the ova are *deposited*," will be clear from two facts: (*a*) That unfertile eggs, whether laid by a queen or by a laying worker will hatch out drones, *no matter in what size of cells they are laid*; (*b*) that a worker egg may be allowed to hatch and grow as a worker larva for some days, but on being lifted out of the worker cell and put into a queen cell it will be fed and raised by the bees *into a queen*, a queen, moreover, as big and strong, as prolific and long-living as any other queen raised all along in a queen cell. I will show "T. W. B." this transference being carried out almost weekly in my apiary. By the way, 5,000 bees would not make a "strong colony"; 3,500 bees weigh 1 lb.; 70,000 bees would be a strong colony in summer; no less.

TINCTURE OF PYRETHRUM FOR INSECT STINGS.

DR. ARTHUR W. THOMAS (Boscombe) writes: It may interest your readers to know that, owing to much rain in the spring and early summer, the larvae of gnats and mosquitos have been exceptionally plentiful this year. *Culex, Corethra, Chironomus aedes*, etc., abound. The stings of these pests are always irritating, and sometimes cause unpleasant symptoms, and, as they undoubtedly feed on any decomposing matter, their lancet-like suction apparatus is anything but aseptic. If exposed to their unpleasant attentions, there is only one remedy of any use as a preventive, and that, as I have mentioned before in your columns, is tincture of pyrethrum applied to hands, face, and exposed parts. Prevention is better still by emptying or covering all water-butts and cisterns, and, if possible, treating ponds and ditches in the neighbourhood of a house with a thin layer of petroleum.

A SOLID FACT.

A CORRESPONDENT sends the following dialogue:—M.D.: "I have examined the patient's urine, and find it to be solid with albumen." Elderly G.P. (called in consultation): "*Solid!* How could he pass it then?"

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

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NOTE.—It is against the rules of the Post Office to receive *postes Restante* letters addressed either in initials or numbers.